

# MANUFACTURERS' RECORD

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## Manufacturers' Record.

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BALTIMORE, FEBRUARY 13, 1908.

Mr. M. T. Richardson, president and treasurer of the *Blacksmith and Wheelwright*, New York city, referring to an article by the editor of the *MANUFACTURERS' RECORD* published in the New York *Sun* of February 7, writes:

It is the most sensible thing I have yet seen in print on this subject, and it agrees exactly with my own ideas as I have expressed them more than once in the last few weeks. The people are sowing the wind in this railroad matter, and they are going to reap the whirlwind some of these days. If they would bear in mind that the railroad system of this country is as essential to its prosperity as the arteries in the human body are to the life of the body, they would see wherein they are making a serious mistake.

### TWOULD BE REGRETTABLE.

The New Orleans *Item* gives strong commendation to the Baltimore *News*, with special reference to its exposition of independence in journalism, and on that the *Item* bases a suggestion of Mr. Charles H. Grasty as a Democratic presidential or vice-presidential possibility. The *Item* makes a mistake. Of politicians the country has far too many; their name is legion. Even of statesmen, men worthy of such a designation, some can be found, and men of presidential timber are not altogether lacking. But of great newspaper men there is a lamentable shortage. No really great newspaper, no man equal to the accomplishment of the *Item's* story of the *News* and its work, could afford to leave such a position even for the presidential chair. The mightiest power in the world is the press. It shapes and molds public opin-

ion, and thus shapes the destiny of nations. Men equal to such a work, men of independence who have the strength of character and resourcefulness to measure up to such a responsibility and to the opportunity, are altogether too scarce for any of them to be spared by being switched off as presidential availabilities. The *Item* is way off. It minimizes its own profession by such a suggestion.

### PAYING THE PIPER.

Robert M. Floyd, writing in the *Trade Press List*, says that the new postal regulations have stirred up a storm of objections in all directions, and he adds:

We are led to believe from much of the talk that has drifted to us that many of the new restrictions will fall most heavily upon small publishers and new publications, as they will be shut out from mailing out enough sample copies to create and build up subscription lists, while on the other hand the older and successful publishers with enormous subscription lists are gloating over the Postoffice rulings that will virtually kill off all opposition. Many of these established publishers have in days gone by knowingly violated every postal regulation in gaining the publicity through which they have grown to success.

The condition here suggested is no unusual result of would-be reform movements. It is not infrequently discovered that the little fellow and the weaker fellow is crushed for the benefit of the big and the stronger by regulations failing to take into account all the elements in a given situation. As things are at present, it is possible for the Postoffice Department, even with the best intentions, to do rank injustice. It ought to be possible for Congress so to legislate as to reduce to the minimum the evils bound to flow from the exercise of bureaucratic discretion.

### NO TIME FOR CROWDING TO THE WALL.

In a letter from Atlanta to the *MANUFACTURERS' RECORD* Mr. Armand May writes:

Conditions throughout this section are becoming normal, and if the entire South will use the "Atlanta spirit" we will go far ahead of the good past. The past few months has been hard on the manufacturers, and some have been placed in the hands of the courts. The major portion would not have been forced to the wall had not lawyers looked up claims and took advantage of the conditions. I think it high time this should be stopped, and I would like you to use your influence discouraging this practice.

The suggestions made in this letter are very timely. The "Atlanta spirit," the spirit which, with abiding, never-failing, never-faltering faith in Atlanta and in the South at large, drives the Atlanta people on to activity and energy and broad work of development despite adverse conditions is the spirit which makes success possible. It is the only spirit which in time of difficulty can rise to the occasion. At present the whole South may well imitate the spirit which has made Atlanta and the spirit which admits no possible defeat even when confronted with depressing financial and business conditions—a spirit

which overrides them all and plucks victory from the very jaws of defeat.

But there is another suggestion made in this letter which demands the consideration of the whole South. The effort on the part of unscrupulous attorneys—attorneys of the character known as "ambulance chasers"—who seek to bring about receiverships in order to fatten on the misfortunes of others ought to be frowned upon by every honest man in the country. This is not a time when any honestly-managed business concern ought to be crowded to the wall. This is a time when creditors and bankers ought to be as lenient as possible, and not undertake to unduly enforce collections. It is a time also when the honest debtor should put forth his utmost exertion to meet every obligation so as to help to ease the situation. No man ought to take advantage of the present condition to delay payments; on the contrary, every man who can do so ought to pay in advance or discount his bills. With this spirit of co-operation in meeting business conditions many a man who has a substantial business but is short of working capital or ready cash could be tided over to more prosperous times to the benefit of himself and his community. Under such conditions every man is his brother's keeper in financial and business affairs, and should to the utmost of his ability recognize his responsibility to others and strive to meet the situation.

### IMMIGRATION TO THE SOUTH.

In spite of quite a number of Southern newspapers' publication of a syndicated interview on immigration to the South with Mary Grace Quackenbos, who has gained some note as a special agent of the National Department of Justice in connection with alleged "peonage" in the South, the people of the South with their wits about them are not likely to fall over one another in enthusiastic scramble to the support of her suggestion. In the first place, there is really nothing original about the suggestion, made on the eve of a "Southern Immigration Convention." It is simply an elaboration and a bunching of divers plans for diverting a certain class of immigration to the South with which students of the situation are thoroughly familiar. It calls for the formation of an organization of employers and of representatives of foreign countries, of transportation interests, of the American Federation of Labor and of representatives of the national and State immigration bureaus to do—what? The answer shines out in this one sentence of the 2000 or 3000-word interview:

If the stream of immigration from Italy and from Austria-Hungary could be diverted toward the Southern States it would be better for the immigrants, it would be better for the South, and it would help at least to diminish the horrors of the congested tenement districts in our Northern cities.

The diversion of immigration from Italy and Austria-Hungary to the South and the relieving of the congest-

tion in certain Northern cities have stalked behind most of the projects coming to the surface during the past five or six years in "Southern conventions" of one kind and another. However disinterested Mrs. Quackenbos' intent may be and deep her sympathies aroused by "settlement" work on the East Side of New York, however anxious European countries may be to rid themselves of undesirable elements of their population and willing to expedite their migration to America, however desirous transatlantic steamship lines may be to benefit financially from the transportation of any kind of exiles from their native lands, and however ambitious this bureau or that bureau of the General Government may be to gain the enormous political power consequent upon controlling the ebb and flow of the labor supply of the country, the South will do wisely in refraining from participation in any immigration movement contemplating an organization undertaking to represent even the whole South alone, to say nothing of one in which transportation companies, foreign Governments, the Federation of Labor and the National Government should have representation.

Five years ago, under auspices having the best interests of the South at heart, a steadily-widening stream of most desirable immigration was spreading over the South, principally from other parts of the country, but including valuable accretions from foreign lands. Intelligent and persistent work by representatives of railroads operating in the South, by State authorities, by local organizations and by individuals was having gratifying results, and the effects are still pronounced. But it may hardly be questioned that the work would have increased in volume and the effects would be more pronounced had not interference come through attempts to use the South in carrying out certain immigration plans in which the real interests of the South were of minor importance.

Such interference should no longer be tolerated. Success and safety for the South in immigration work lie in a return to the earlier methods, disregarding all projects for "Southern conventions" or for solutions of social problems of New York or other great cities, or of political and economic problems of foreign nations.

### ACT NOW—GET READY FOR GOOD TIMES.

In considering the general industrial situation, with special reference to iron and steel and cement and other building materials, it is well to bear in mind that the present small consumption must be made up in the not distant future by a consumption very much greater than the high point reached last year. There is no let-up in the increase in population. There is no material decline in the rate of destruction which is going on of railroad rolling stock and roadbed. There is no decrease in the wear and tear on wooden trestles, and

only a temporary halting in the requirements of the country which make for the largest use of iron and steel and cement and lumber. With an increase in population of 2,000,000 a year, with an enormous increase in consumptive requirements by virtue of improved labor-saving machinery and modern methods, the activity of 1905-1906 and the early part of 1907, great as it seemed at the time, will soon be but a normal condition. Our regular volume of business, considering the growth of the country, must in the very near future fully equal that of the period mentioned, while the abnormal or special periods of activity will run as far ahead of that as that was ahead of 8 or 10 years ago. Railroads must be reconstructed and new lines built at a cost of many thousands of millions of dollars. Economic conditions will force this even if a great deal of the money could only be had through receivership certificates. No road can stop improvements for any great length of time without being bankrupt physically, and this would soon mean financially. If money cannot be had through the usual channels, it will of necessity have to be found through the work of receivers, for construction and development must go on. As disastrous as such a condition would be to owners of securities who could not hold on until the inevitable reaction would come, the railroads must expand and practically double in mileage and in equipment within the next 10 or 12 years; in fact, a very large amount of it must be done within the next five or six years. City growth has only fairly begun. The great cities of the country, with one or two exceptions, are not much more than overgrown villages. Municipal improvements on a scale never seen in our country must go forward. Good roads must be built at a cost of hundreds of millions of dollars, and every other line of work needed by a virile, vigorous population of 85,000,000 people at present, to be 105,000,000 people 10 years hence and 130,000,000 20 years hence, backed by resources unequalled elsewhere on the face of the earth, must go forward upon such a scale commensurate with our natural advantages and the world's wonderful material progress. It behooves the wide-awake, far-seeing business man to recognize these conditions and to prepare for this coming activity.

Now, when labor is cheap and abundant, when building material is lower than it has been for some years, when iron is down in price, when machine shops can accept and fill orders within a reasonable time, is pre-eminently the opportunity for the far-seeing man to prepare for the future and for the hustling man or concern to secure business. In this time of dullness and low prices, when the timid folks are unwilling to spend a dollar for fear prosperity will never return, the man of strength and force and business ability should be putting his factory into shape, re-equipping it with the best machinery, enlarging his plant, in order to enable him to produce to the best advantage and at the lowest cost. This is a great time, a time of opportunity for the business man who wants to be ready to reap his full harvest of prosperity with the next swing of the pendulum from present depression to the high-water mark of the future. Nobody need imagine for one moment that this country will not soon right itself. Nobody need imagine that public opinion will not be on the side of property rights and the upbuilding forces of the country, compelling legislators to join in constructive rather than destructive work. In the MANU-

FACTURERS' RECORD of January 2 Mr. Charles A. Moore, president of Manning, Maxwell & Moore, the great machinery builders and handlers, discussing the outlook for the future, said: "I have never found it profitable to sell the United States short." This same sentiment was expressed several years ago to a correspondent of the MANUFACTURERS' RECORD by Mr. Henry M. Flagler, who, being asked his views of the future, suggested that every man of ability who would "keep his head above the financial waters and bet on the growth of the country would inevitably succeed." And it has been said that the father of Mr. J. P. Morgan once said to the latter: "The pessimists may win for a time, but in the long run the growth of the country will always beat them." The men who recognize these facts and who seize an opportunity such as this are the ones who make the fortunes of the world.

This is the time for men who can command capital and for municipal and county authorities to carry forward their projected improvements. Hundreds of thousands of laborers are out of employment, wages are low and materials can be had at a much lower cost than last year. Under such circumstances men who expect to build and can secure the needed money ought to go ahead at once, while States, cities, towns and counties which have planned for public improvements should act immediately. They would thus secure the lower cost of construction work and help to create prosperity.

#### VIRGINIA GEOLOGICAL SURVEY.

Conviction is expressed in Virginia that this year's General Assembly will fail to place the State Geological Survey upon a permanent basis. It is hoped that the conviction may prove to be errant. For it to be verified would be unfortunate for Virginia. The old Commonwealth needs a well-equipped and liberally-supported geological survey as a most important agency for the uncovering and complete exploitation of its natural resources. The intelligence and patriotism of the State is in favor of the survey. Under such circumstances the survey should be. But interference has come about through the growth of a rivalry between two Virginia institutions of education over the location of the headquarters of the survey and has expanded beyond its original scope. For this the bill in the General Assembly providing for a particular site for the survey is partly responsible, but even more so is the plan of campaign adopted by advocates of that site. This plan, as unrolled in inspired articles printed in the newspapers of Virginia and Maryland and published by them as news matter, is in itself suggestive of the mistake that would be made in selecting as a site for the survey the place proposed in the bill. It suggests a narrowness of purpose and a lack of comprehension of the verities of the case in revealing an inclination to make use of a geological survey for the advantage of one institution rather than to use an institution as an instrument in assuring competency and freedom to the survey.

Robbed of its extraneous matter, the authoritative plea in behalf of the site for the survey contemplated in the Rison bill is essentially an argument that the educational energies of Virginia should be concentrated in one institution, if the argument has any real force. If there was but one institution in the State, such a policy might

be eminently desirable, but it is not to be considered when its success would mean a body blow at another institution which for obvious reasons should be the home of the survey. Realization of that fact has brought about a situation in Virginia that, postponing indefinitely the establishment of the survey upon a permanent basis, threatens, without benefiting the institution that should be the home of the survey, to create antagonism against the institution in whose special interest the Rison bill seems to have been framed. Misfortune would thus be added to misfortune.

The two institutions involved in the contention have each their part to play in the educational life of Virginia. There is enough for each to do without seeking to appropriate the domain of the other. In the doing the high ideals that have characterized the past of the institutions of Virginia must be maintained. Those ideals had nothing of pedagogic wire-pulling about them, though they stood for educational statesmanship of the highest order. Those ideals would hardly have permitted the developments that have come to the surface in connection with promotion of the proposed geological survey. Adherence to those ideals would retire from the question every *aut nullus* feature. It would place the University of Virginia to the front in making the permanent geological survey a fact, and a fact established at its proper place—the Virginia Polytechnic Institute. As it is, the university has been led into a woeful strategic error. It is not too late to correct it.

#### RESPONSIBILITY FOR RAILROAD DETERIORATION.

In a report to the General Assembly of South Carolina by the committee appointed to investigate the railroads of the State, among many conclusions reached in summing up its lengthy investigation is the following:

Your committee further finds that the roadbeds and tracks in this State are, with few exceptions, in very poor condition; in fact, it is apparent from the report of the expert who was employed by your committee that the physical condition of the railroads of this State is not up to the standard which was established by the railroads themselves 20 years ago. It very strongly advocates that some action should be taken to remedy this condition.

This report is not made in any unfriendly spirit to the railroads. On the contrary, the committee is simply presenting its conclusion based on an investigation by its expert. This portion of the report tallies exactly with what the MANUFACTURERS' RECORD has repeatedly said. It is applicable not simply to South Carolina, but very largely to the entire country. The physical condition of the railroads of the country is rapidly deteriorating. This report says that the South Carolina condition is not even up to the standard established by the railroads themselves 20 years ago. No one familiar with the railroad condition of the country need be surprised at that. There are only a few railroads to which such a description does not apply. Some years ago A. J. Cassatt, president of the Pennsylvania Railroad, a more far-seeing man than most of the railroad people of the country, laid out a plan for duplicating the entire transportation facilities of that road at an expenditure of a good many hundreds of millions of dollars. Many people in Pennsylvania became frightened. It was openly said that Mr. Cassatt was evidently of an unbalanced mind, and that it would be impossible to wisely expend such vast sums upon the Penn-

sylvania road. Even financial ruin was talked of. Mr. Cassatt lived to see that even his broad plans were not equal to the growth of the country, and before he died he realized that vast as had been the expenditures upon the expansion of that company, its facilities were still far behind what would be required to keep pace with the marvelous increase in the freight and passenger traffic of the country. E. H. Harriman was another railroad man who looked ahead. He may be a great speculator, but certainly he is a great upbuilder. He saw how inadequate were the facilities of the Union Pacific to take care of future growth, and he undertook broad plans for improvement. When he secured the Southern Pacific the general public was under the impression that the road was in fine physical condition, but in five years Harriman spent \$100,000,000 on improvement work for the Southern Pacific and probably twice as much for the Union Pacific. He was one of the few men of prophetic vision who saw the coming marvelous expansion of this country, and, like Mr. Cassatt, had the courage to measure up to the opportunity and the ability equal to the raising of the money needed for such a campaign of expansion. The great majority of the railroad people of the country were nearsighted. In that they were not different from the average of business men. Without the gift of imagination to see into the future, they did not realize that the country was growing more rapidly than the railroads.

After the depression of 1903 there came such a period of business activity that practically every railroad in the United States was swamped. Most of them had more traffic than they could profitably handle. The energy and activity of every officer had to be bent upon moving trains and securing rolling stock to meet the insatiate demands of an ever-growing traffic. No time could be found for giving proper attention to the roadbed of many lines; in fact, the lines were so crowded with business that it was almost impossible to delay traffic for the improvement of roadbeds. Under these circumstances the physical condition of very many roads deteriorated because improvements were not equal to the tremendous strain put upon rolling stock and track. Just when the railroad people were being fully aroused to this situation, and were struggling to meet it, just when they had commenced to grasp the fact that \$5,000,000,000 or \$6,000,000,000 would be required to fully develop the transportation facilities of the country, we entered upon a period of wild hysterics in denunciation of railroads which swept over the whole land. Capital could no longer be found for railroad investment. Shortsighted, foolish, indeed, to the extent that it might be said of him that "a fool and his money is soon parted" would have been that man who during the last 12 or 15 months would risk much money in railroad securities. The public had taken the reins and had determined to run the country to suit the views of the hysterical clamorers, regardless of the final outcome. We have thus had a condition for a few years in which physical improvement could not keep pace with the terrific strain on roads and rolling stock, and since then we have had 12 or 15 months in which it has been impossible to secure money to carry on the improvements so much needed. The condition in South Carolina is not unlike that in much of the country. Once the physical condition of a railroad begins to depreciate it runs down with amazing rapidity. As



matters stand now, the general public, and not the railroad managers, are responsible.

The general public is responsible for the agitation in National and State Legislatures. The general public is responsible for the character of men that have been sent to the legislative bodies of the country, and, therefore, it is but right that upon the general public should fall the suffering and losses which are to be entailed by the wrecks and congested freight of the future. It is well to bear these conditions in mind just now. A year or so hence those who are then disposed to mercilessly criticize the physical condition of the railroads of the country will have before them the fact that the agitation against railroads and the demand for lower rates made by the public itself is responsible, and the public must suffer.

#### SOCIOLOGY.

"But we find it difficult to believe that a Columbia University sociologist has 'seriously declared' that intermarriage between blacks and whites exists in the South to such a degree that the 'negro is fast disappearing,'" says the *Baltimore Sun*.

Why should the *Sun* find it difficult to believe that any sociologist seriously declares anything? We have it authoritatively that universities all over the country are coming to realize the importance of sociology. True, and individuals who have not enjoyed the blessings of a university career or who have not permitted such a career to smother common sense are discovering more and more frequently pathetic results of that realization.

Mr. F. G. Gardner of Lake City, Fla., in a letter to the *MANUFACTURERS' RECORD* says:

I enjoy the paper very much and congratulate you on the excellent standard you maintained in the *MANUFACTURERS' RECORD* pertaining to the recent money stringency.

#### ROMANCE OF AN INDUSTRY.

How the building up of a great industry may have all the characteristics of a thrilling romance and how the story of it may be told in a way to enchain the attentive interest of the reader from start to finish is strikingly shown in a brochure entitled "The Man Who Didn't Know When He Had Failed," and written by F. W. Haskell, president of the Carborundum Company, Niagara Falls, N. Y., in a description of the development of the carborundum industry. Some 15 years ago, according to Mr. Haskell, Edward Goodrich Acheson, in a series of experiments involving the use of the electric current, produced some little, almost microscopic, crystals, intensely hard, intensely sharp and infusible at any known heat. The cost of production ran up into dollars per pound, and at such a price about the only purpose to which it could be economically put was the polishing of precious stones. Upon an order from jewelers for 10 carats of carborundum powder at 40 cents a carat the Carborundum Company was organized and financed, and by improved methods the price was hammered down to a minimum of \$880,000 a ton and the output was increased far beyond the market for the substance for polishing purposes. It was then found that it was highly satisfactory for valve grinding, and the demand in this direction became so great that enlargements of the plant were called for, and, in order to secure a steady supply of electric current, an electric-light company was organized, and for use of the surplus electrical energy a dinkey electrical railway was brought into being. When the company had reached a point of using 135

electrical horse-power in its furnaces, of producing at the rate of 45 tons a year and having a market for only 25 tons a year, the company being, in the language of Mr. Haskell, "crazy fanatics," entered into a long-term contract to use and pay for 1000 electrical horse-power a year generated from Niagara Falls. To use this energy special apparatus had to be designed, built and installed, and the art of manufacturing carborundum into various articles had to be learned and was learned by the managers of the company. By 1898 the sales of the substance caught up with the product of the 1000 horse-power, and an additional 1000 horse-power was promptly ordered. Pushing its wares, the company was obliged to build up several really independent lines of trade, until now the present output of carborundum is 5000 tons a year, which, if sold at the price of 20 cents per carat, formerly obtained from the jewelers, would give the company an annual revenue of \$4,400,000, 000, which is more than twice the value of the annual output of manufacturing in the whole South. But, as Mr. Haskell points out, "that which was first the main product, and then waste product, has now become a by-product, and the identical powders which a few years ago were sold to gem polishers by the carat at \$880,000 a ton are now sold to steelmakers by the carload at \$80 a ton." In that sentence is condensed the story of the industry. But it is vain to attempt to condense the beauties of the story; it is cruel to do so. The story should be read in its entirety. It is a good one and it is well told.

#### STUMPED.

The *MANUFACTURERS' RECORD* receives at the rate of about 1000 a year requests for information of many kinds. It makes an effort to answer all requests fully. But it was stumped the other day when it was asked to send one of its issues showing the names and locations of all the manufacturers in the United States and the lines of their products. The impossibility of the situation is indicated by the fact that the National Census of 1900 found nearly 520,000 separate establishments of manufacturing and mechanical arts, while the census of 1904, dealing only with factories, found 216,262 separate establishments. To print the names, the addresses and the titles of the products of these 216,262 factories in type that could be easily read without the aid of glasses would require a publication about seven times the size of an average edition of the *MANUFACTURERS' RECORD*.

#### BUSINESS MEN PROTEST.

In view of a bill introduced in the Kentucky Legislature to make it unlawful for the American Tobacco Co., the American Snuff Co. or other similar corporations to engage in business in the State, the directors of the Board of Trade of Louisville have adopted resolutions protesting against the measure as likely to result in injury to the city and State. The resolutions assert that if the measure becomes law it will throw out of employment in the State labor receiving more than \$75,000 weekly wages, and will have the effect of deterring other manufacturers from seeking investment in Kentucky.

#### THE COTTON MOVEMENT.

In his report for February 7 Col. Henry G. Hester shows that the amount of cotton brought into sight during 100 days of the present season was 8,518,687 bales, a decrease under the same period last season of 1,637,635 bales. The exports were 5,326,230 bales, a decrease of 383,823 bales. The takings were, by Northern spinners, 993,481 bales, a decrease of 728,617 bales; by Southern spinners 1,262,192 bales, a decrease of 52,437 bales.

## THE FREIGHT RATES OF THE SOUTH.

By LOGAN G. McPHERSON,

Lecturer on Transportation at Johns Hopkins University.

[Written for the *Manufacturers' Record*.]

If there is any section of the United States that more than another is protected by natural forces from extortionate transportation charges it is the region extending from Chesapeake bay to New Orleans, between the mountains on the one side and the ocean and the Gulf on the other. It is here, of all places in the country, that the railroads have most frequently been thrown into bankruptcy, have had the hardest struggles to obtain revenue equal to the outgo, to say nothing of the endeavor to provide and maintain adequate facilities. It is here that no sooner has the gleam of good fortune betokened a prosperous future for the railroads than the clouds have again closed over them in darkness.

As everyone knows, the railroads of the South were devastated by the Civil War. As they were pulling themselves together they were bankrupted by the panic of 1873. As they were getting upon their feet again, after they had pretty well eliminated the internal friction attendant upon their growth that began anew about 1880, when they were just reaching and settling down to a business basis, they were bankrupted once more by the panic of 1893. Again they were pulled together and were beginning to attract the attention of investors when the revival of business of 1898 burst upon them, deluging them with torrents of traffic that overwhelmed stations, tracks and equipment. Then came the struggle with too much prosperity—a struggle in which the managers of the railroads had the stimulus of happy anticipation. They rebuilt their tracks as they could and obtained new cars and new locomotives as fast as the factories could turn them out. As the men who pay thoughtful attention to the material affairs of this world were congratulating the Southern railroads upon their emergence from the worst of their difficulties these railroads found that the rising tide of prosperity was sweeping past them and beyond them. They found that they were having to pay mounting prices and climbing wages, while such attempts as they could make to obtain higher recompense for their one product of transportation met with stubborn and unreasoning resistance. In the year 1905, taking the averages for the entire country, the net return to \$1000 of capital in manufactures was \$151; the net return to \$1000 of capital in agriculture was \$98, while the net return to \$1000 of capital of railroads was but \$44.

Yet in this year of 1905 the railroads were beset with a plague almost worse than any that had yet befallen them, a murrain that overran the country and fell blackest and thickest upon this Southern land, the murrain of the politician. It is the simple truth that the men who really ship the freight of this country and directly pay the freight bills, the men who come in contact with the traffic officers of the railroads and know something of the problems with which they have to contend—it is the simple truth that these men were then, as they are now, fairly well satisfied with the freight rates of the country. To say they were entirely satisfied is perhaps too strong, but they found the railroads in general to be fair and prompt in the consideration of any just request for a readjustment of rates. The complaints in large measure came from men who had not adjusted their business to the shifting economic currents, in no small measure from unsuccessful men who wanted the railroads to share their bur-

dens. These complaints were seized upon by the politicians. Now, the politicians do not ship freight, do not pay freight bills, and know nothing about freight rates. The wage-earners, the salary-earners, the teachers, preachers, doctors and lawyers do not ship freight, do not pay freight bills, and, as a rule, know nothing about freight rates. But it is these men who vastly preponderate in our population; it is these men whose votes determine who shall conduct our Government. And it is the minds of these men that were poisoned by the ignorant diatribes of the politicians. It is the temperament of the business man to hold his tongue; it is the temperament of the politician to talk. The business men who knew something about freight rates kept still; the politicians who knew nothing about freight rates talked.

That the freight rates in this Southern country can never be exorbitant is susceptible of easy proof.

Nearly all of the wearing apparel of the people of this favored region, fabrics and made-up garments, their hats and shoes, nearly all of the smaller manufactures, the more delicate appliances and bits of mechanism come from the New York and the New England district. The same ocean that penetrates the harbors of Boston and New York beats upon the coast from Virginia to Florida, and its greatest estuary washes the shore from Florida to Texas. Steamships and sailing vessels ply along the 4000 miles of this coast line, and where there is transportation by water there never can be exorbitant charges by rail.

Before there were railroads there was communication by water between the Northern cities and Norfolk, Richmond, Wilmington, Charleston, Savannah, Jacksonville, Pensacola, Mobile, New Orleans and Galveston. Before there were railroads there was communication by river between the ocean and Columbia, S. C.; Augusta, Ga.; Macon, Ga.; between the Gulf and Columbus, Ga.; Montgomery, Ala., and Selma, Ala. That water communication which existed before the days of the railroads exists in this day of the railroads, and its effect is such that the rates on the goods from New York and New England to these cities are so low that they practically do not enter into the retail prices of these goods. The apparel of a fully-attired man or woman in any of these cities will not have paid the transportation lines more than six to eight cents, and that apparel would cost the wearer neither more nor less if the transportation service were rendered entirely without charge.

Before there were railroads each of these cities was a center through which the goods from the North were distributed by stagecoach and wagon throughout the surrounding country, and through which the cotton, rice and tobacco, the resin and turpentine of the surrounding country were gathered by stagecoach and wagon for shipment to market. The first railroads took the place of the stage and wagon lines. They were local roads carrying a local traffic between the distributing center and the surrounding country, and their rates averaged something like one-half the wagon rates. The rate by water to or from the distributing center was the basing rate, to which was added the local rate to or from the local point beyond.

That they might serve a wider area, these local roads were extended. The local road extending westward from one

distributing center would cross another local road extending eastward from another distributing center. Not only the roads, but the respective distributing centers would compete for the business of the point of intersection and of its vicinity. For example, as the line from Augusta, Ga., crossed the line from Macon, Ga., at Athens, each of these cities and each of these lines would compete for the trade of Athens. Competition would make the rates to Athens, which would, therefore, become a basing point. The rate to a point beyond would be made by adding the competitive rate to Athens to the local rate from Athens to that point.

The various local railroads extended until they connected distributing center with distributing center, intertwining in a network that ramified all over this Southern region. Instead of each seaport, each distributing center and each railroad serving an immediately tributary territory or competing within a limited area, seaports, distributing centers and railroads competed for the trade of vast areas. The ensuing strife led to agreements for a division of traffic between this railroad and that, between this commercial center and that. Warring railroads would become bankrupt and be purchased by competing railroads, and various railroads through amalgamation sought that strength which lies in unity. The extensions and the amalgamation of different lines formed through rail routes along the seaboard, and these through rail lines sought to carry through traffic from the northeast that in the past had been carried by vessel. But to this end their rates could never exceed the rates of the coastwise vessels except by a modicum made up of the amount of the insurance by vessel and the slight premium for the advantage of transportation by rail where there was such an advantage. The rates to interior local points could not exceed the through rates by vessel to competitive basing points plus the local rail rates. That these railroads at times and in places tried to exact inordinately high local rates to points to which there was no competition cannot be denied, but even with such exactions the earnings of the Southern railroads never compared with the earnings of the railroads of the North and the West. Their power to charge unduly high local rates has, however, in the last decade or so been taken away from them by the railroad commissions of the various States, who have prescribed what the local rate shall be.

It is conceded, however, that while the seaboard rail lines must meet the water rates to points having water communication and to other points having rail communication with the coast, there is no reason that they charge similarly low rates to the intermediate points to which there is no water competition. That is, as in the days of the short local railroads their rates were made by adding their local rates to the rate at which the vessels carried the traffic to the basing point, so also at this time is the local rate made by adding the local rate to the rate made directly or indirectly by the water lines, no matter at this day whether the traffic is carried to that basing point entirely or partly by water, or entirely by rail. If traffic, for example, is carried through Augusta to a point nearer but east of Macon at a through rate made on Macon, it is the railroad, and not the shipper, that is the loser. What the railroad does is to accept a less rate than it would accept if Macon were not a basing point, for in that event it would add the full local rate from Augusta to the local point in question.

It may be asked why do the railroads carry such through traffic if they are obliged to accept such low through rates?

Why would it not be better for these railroads to confine themselves to their local traffic, leaving the through traffic to the vessels? There is the reply that in this event the entire burden of their support would fall upon the local traffic; that such through traffic as they can obtain, if it pay even but a little more than the immediate expense incurred for handling it, contributes to the maintenance of the road and relieves the local traffic to that extent. This reasoning is all the more valid when the low-rate traffic provides loading for returning cars that otherwise would have to be handled empty.

This water competition, which keeps down the rates of the railroads along the Atlantic seaboard, not only affords cheap transportation to the inhabitants of that region on the products of New York and New England, but it gives them cheap transportation on the meat and meat products, grain and grain products from the West and Northwest.

Because of competition between themselves, because of the competition of the Great Lakes and the Erie canal, and because of the necessity to bring such products as these to the seaboard at rates that allow them to be exported for sale abroad in competition with similar products of foreign countries, the great trunk lines leading from Chicago and other Western cities to the East established markedly low rates to the seaboard, less to Philadelphia than to New York and Boston, and less to Baltimore than to Philadelphia. The railroads terminating at Norfolk, to obtain a share of this traffic for their lines, established the same rates to that port as are in effect to Baltimore. These low rates to Baltimore and to Norfolk on grain and meat, the great staple articles of food, plus the vessel rates from these ports to the ports of the South Atlantic coast, make exceedingly low rates along the entire Atlantic seaboard, which for many years mainly obtained its supply of such commodities from the West by way of Baltimore and Norfolk.

The development of the interior portion of the South, the region between the Ohio river and the mountains, naturally was but in its early stages when the seaboard had attained a considerable population. In the early days merchandise from the East reached this interior region via Pittsburgh and the Ohio river, being distributed over the wagon routes and over the smaller rivers from Cincinnati, Louisville and other distributing centers that had grown at points of natural advantage. As in the Southeast, and, indeed, as everywhere else, the first railroads were short local lines extending from the distributing centers and charging local rates. The railroad built southward from Louisville was extended to Nashville, and thence down through the Mississippi valley, serving the population that, although not immediately contiguous to the Mississippi river, still benefited by the transportation facilities of that waterway in much the same manner as the interior of the Southeast benefited by the transportation facilities of the ocean. The rates of the Louisville & Nashville Railroad were held down by water competition not only to Memphis and to New Orleans, but to Mobile, which has direct water communication with New Orleans and to Montgomery and Selma, to which there is navigation by way of New Orleans, the Gulf and by river from the Gulf. The Louisville & Nashville Railroad, therefore, no sooner became a through line than it was beset with basing points and the obligation to make rates to local points by combinations upon basing points. Indeed, the rates, even from Louisville to Nashville, are modified by the Cumberland river, which is navigable up from the Mississippi to Nashville. These conditions also

beset the other railroads that later penetrated this part of the Mississippi valley.

As the area nearer the mountains attained some development, particularly after the utilization of the iron and coal deposits, the railroads extended eastward from the Mississippi region, finally through Chattanooga, Knoxville and Asheville, leading up to connection with the railroads that penetrate the Southeast. These railroads across the mountains had from the first but scant traffic, and their traffic even now is scant in comparison not only with that of the roads north of the river, but of those along the southern coast. It is largely local, and the local traffic is necessarily carried at local rates. The connection with the Southeastern systems, however, permits them to carry grain and grain products, meat and meat products from the West and the Northwest into the far Southeast. To do this they are obliged to meet the low rates of the trunk lines to the seaboard, plus the ocean rates to and through the Southeastern ports. Although this traffic brings revenue that more than covers the operating expenses caused by the traffic, if the straggling and struggling lines had made such rates on all their traffic they would have been bankrupt almost before they had started.

Chicago, St. Louis, Cincinnati and Louisville have been developing in the manufacture of garments and of certain other commodities that theretofore had been produced exclusively in the Northeast. The manufacturers and wholesalers of these cities seek to extend their markets in the interior South, and have besought the railroads to make the same rates per mile to this territory as are made to it by the lines from Baltimore and the East. The railroads responded by making the same rates in the aggregate from Louisville to Atlanta as are made from Baltimore to Atlanta. The manufacturers and wholesalers, or a portion of them, in these cities on and north of the Ohio river are, however, not satisfied with this and similar adjustments. They insist upon proportionately low rates per mile, which would give them an advantage in this region over their longer established competitors in the East. This concession the railroads decline to make, stating that it is not justified by the volume of the traffic, and that in reality it is not needed by the shippers of the Northern cities, whose trade is rapidly increasing in this region. This, perhaps, is the most bitterly-contested point between railroads and shippers anywhere in the United States. The Interstate Commerce Commission a dozen years ago ordered the railroad companies to reduce their rates, but the commission was overruled by the Supreme Court of the United States. Since that time the railroad companies have made a material reduction in their rates from the Ohio river into this territory. They claim that if further reductions are made the trade of Baltimore and the East in this region will be so jeopardized that the shippers of those cities will compel a reduction in the seaboard rates, and that they, the railroads, will be ground between the millstones.

It may seem to many who do not penetrate to the causes that the freight-rate structure of the South is a patchwork, a crazy quilt. Even a Northern railroad man recently said that the freight rates of the South are made without rhyme or reason. The traffic in the territory where the rates are familiar to that man is an East and West flow, the only water competition being of the Lakes and the Erie canal, which also applies between the East and the West. Where the traffic thus flows in direct channels the Trunk-line Percentage System, whereunder the rates between Chicago and New York are 100 per cent., and the rates to and from

intermediate points a fixed percentage thereof, was a natural development not difficult of adoption, and with the tremendous growth and great density of traffic in that region not difficult of observance. Such a system was once devised for the South, but its utter lack of practicability because of the criss-crossing of the water competition was soon demonstrated.

The ocean on the east, the Gulf on the south, the Mississippi river on the west, the Ohio river on the north and the dozen or so great navigable rivers that extend from the central mountains to the east, to the south, to the west and to the north into these great waterways, give to the South a comprehensive and a varied system of water transportation not possessed by any other region of the United States. These waterways not only cut into the topography of the South, but they cut into the traffic currents. These traffic currents do not in any event flow in definite east and west or north and south channels, but are twisted into whirls and vortices. Its system of water transportation has been, and is today, one of the greatest of the many blessings of the Southland. The obverse of this is that it has been one of the greatest deterrents to the profitable development of the railroads. The railroads have had to do the best they could, and when human limitations and the succession of burdensome conditions are considered, it is hardly fair to say that they have not done the best they could. Upon analysis the freight-rate structure of the Southern railroads is found to be a growth along economic lines, as well defined and as closely adjusted to the needs of the South as the trunk-line percentage system is to the needs of the region between Chicago and St. Louis and New York.

The peculiar water conditions have forced basing points, and the peculiar commercial conditions, which largely have their root in these water conditions, have forced other basing points. Of these, the most striking example is the city of Atlanta. Situated in the geographical center of the South, almost equidistant from Cincinnati, Louisville, Cairo, Memphis and New Orleans, and having the benefit of water transportation through any of the South Atlantic ports, it was inevitable that this city should become the focal point of a great competitive struggle. Equilibrium could only be obtained by an equalization of rates to this center, which has developed into one of the foremost wholesale and manufacturing cities of the South.

This system of basing points could not have been developed solely for the benefit of the railroads. The railroads must serve the needs of commerce. No artifice of man can stem the working of economic law throughout so extended a territory. It was once universal in the South, and still at many places is customary, that the wholesale dealer extend a long credit to the retail dealers in his vicinity; that is, that he carry them. Abolish the basing points, fix a scale of rates that uniformly increase with distance, and you drive the source of supplies back to the source of production. The retail dealer will no longer be able to keep as great a variety of merchandise on the same capital, and as he will not be able to so promptly replenish his stock, his merchandise will no longer be so fresh.

Underlying all that has been said, however, is the fact that while the freight-rate adjustment of the South has been laid upon foundations that were fixed for the railroads, and which they did not fix for themselves, that adjustment is but a basic floor upon which is being wrought an increasing industry and an expanding commerce—a commerce that in its actual and in its potential vastness and variety would be impossible were the region dependent



upon water transportation lines or upon short, disconnected local railroads. This is recognized by the men who really do the business of the South, and whose energy is given to its development. No one realizes now more clearly than they how great is the damage brought upon not only the transportation interests, but the industry and commerce of the entire South by the unreasoning agitation of the blatant demagogue.

The South still raises rice and cotton and tobacco, as it did in the days of vessels, stagecoaches and wagons, but it also weaves the cotton into cotton piece goods that are marketed all over the world; its coal transforms the ore into the pig-iron, which finds its smallest market in the South, its greatest in the North and East. From its acres of fertile lands fruits and vegetables are carried to Chicago and to New York, and to all the region that intervenes. These achievements would have been impossible without the railroads, as would have been the utilization of the vast forests of the South and the Southwest, to which the North and the East look for a great share of their lumber. Along the lines of the railroads are multiplying factories that give forth varied products. This development would have been impossible if the railroads had not amalgamated into great through lines, if their through rates had not been adjusted to permit the widest marketing of these products, furniture in competition with the factories of Chicago and Michigan, cotton piece goods in competition with New England and Manchester. It is the development of such industries in which the South at this time has the most interest, and therefore it is the rates on the products of these industries that are of the utmost importance to the South. At the time of the formation of the great Southern systems of railways there was at once undertaken the process of adjustment of rates necessary to serve these ends. Rates were made on the competitive products of manufacture practically without regard to distance, often without much regard to the immediate revenue of the railroad companies, their aim being to build for the future. Indeed, the action of the Southern railroads in making such low rates upon the products of the industries was a factor in the bankruptcy that overtook them in 1894. It goes without saying that such rates would not have been made and would not now be in effect if the short local railroads had not been amalgamated into great through lines. Short local railroads minister only to short local traffic.

Yet the Legislatures do not seem to want the Southern railroads to make a simple living. They reduce their rates, raise their taxes and drive them into bankruptcy. In at least one of the States they are trying to prohibit the development of the great through lines, to bring about a disintegration that will result in the old-time short local lines, with short local traffic.

Not content with interfering with freight rates, the public authorities have arbitrarily reduced passenger fares. If the Governor of New York adds to his popularity by vetoing a bill reducing the passenger fares in that State of dense traffic; if the Supreme Court of Pennsylvania declares unconstitutional on the ground of confiscation the enactment reducing the passenger fares in that State of dense traffic, what must be said of the action of the Legislatures of the South, where the passenger traffic is not nearly as dense as in either New York or Pennsylvania? The business men who contribute in greatest amount to the passenger revenue are already clamoring for the facilities for which they are willing to pay.

## An Argument for Producer-Gas Power Plants.

By HARRY W. ANDERSON, ASSO. MEM. A. S. M. E.

[Written for the Manufacturers' Record.]

It is not the intention in this article to discuss the fundamental, physical and chemical laws of gases or the bearing that the laws of Boyle and Mariott, of Charles, Joule, Dalton or Gay Lussac may or may not have upon the subject, nor is it desired to enter into a discussion of the history, design or efficiency of the gas engine or to exploit any particular piece or assembly of apparatus constituting a complete gas-producer power plant. It is the intention, however, to present to the reader in as clear and concise a manner as possible, free from technical details, the advantages the producer-gas power plant has over the steam plants, with the hope that a better understanding of the subject as a whole may result.

It should be fully understood at the start that producer-gas power plants are no longer an experiment; on the contrary, they are being operated successfully both in this country and abroad. In Germany particularly, where the serious problem of an adequate fuel supply has brought about the realization of the necessity of husbanding their fuel resources, the producer-gas power plant is looked upon to give and does provide the same reliability of operation as the steam plant, and it can be truly said that this reliability of operations holds good equally at home or abroad when the producer-gas power plant is designed and installed to suit the conditions under which it is to furnish power. It is unfair to assume regarding any power installation, whether it be steam or producer gas, that it will under all circumstances fit the case and operate properly. It will not, and no installation should be made until the requirements in each instance are gone into fully and are clearly understood. This done, the plant should be designed and equipped to meet existing conditions. Both the gas producer and gas engines should be fully adapted to the work they are to perform, and a proper appreciation of every requirement in its broadest sense is the only sure way to avoid future operating troubles.

Having thus in a general way stated the present status of the producer-gas power plant, we now come to its component parts, the gas engine and the gas producer. As regards the gas engine, there are a number being manufactured at home and abroad that are thoroughly reliable and that can be absolutely depended upon to give continuous and satisfactory results for all services. The gas engine requires no more labor to run it than the steam engine of equal capacity, notwithstanding the impression which is abroad that there is something about it requiring phenomenal skill and superhuman intelligence on the part of the engineer. This is far from the truth; indeed, it is not the truth at all, as it takes no greater knowledge and ability to operate a producer-gas engine than it does a steam engine of like capacity once an intelligent man has been properly instructed, and it is an established fact that the properly-designed and built producer-gas engine requires no more care and attention than a steam unit of similar power.

Having thus briefly outlined a few of its points of advantage, we now come to the other component part of the producer-gas power plant, the gas producer, the source from which the engine receives its motive power, producer gas. In some way, and for some inconceivable reason, the impression has gone abroad that the gas producer which furnishes producer gas to the engine for power purposes is an ex-

ceedingly complicated piece of apparatus, having all sorts of additional auxiliary apparatus and requiring an exceptional degree of intelligence on the part of the operator.

Impressions of this character will not bear the light of investigation, simply because they are grossly in error. The producer-gas plant, consisting of the producer proper, in which the coal is gasified; the wet scrubber, through which the gases pass in the process of cleaning; the economizer of the anthracite and bituminous producers, and in some makes the boiler of the bituminous producers, each furnishing steam to the producer for gasmaking, as well as for operating a tar extractor in some types, are certainly no more complicated than the steam boiler, with its auxiliary pumps, heaters, separators, condensers, economizers and what not. The repair account can certainly not exceed that of the steam boiler and accessories, and should be less. Every properly-designed, and, consequently, commercially successful gas producer will make from a low-grade and therefore low-priced coal a satisfactory gas for use in a gas engine. This fact alone strongly recommends the gas producer for localities where a poor grade only of steam coal at a reasonable price is available. It requires no more labor for its operation than the steam boiler; frequently less, because of the fact that gas producers are made in larger units of powers than are steam boilers. The stack of the steam plant does not obtain. There is no occasion for a stack, as the gas producer makes no smoke, and therefore presents a practical solution of the smoke nuisance, which so affects our larger manufacturing cities. During the time it is not in service it requires much less attention than the steam boiler, and its standby losses, being limited to radiation losses only, are necessarily very small. In this one particular alone the gas producer has a most decided advantage over the steam boiler. The gas producer can be fired and put into shape to furnish suitable gas much quicker than it is possible to get up a sufficient pressure of steam on a boiler; both being cold, and after a lay over of hours, the gas producer can be started up and will provide satisfactory gas upon which to operate a gas engine in from 20 to 30 minutes, a thing impossible with a steam boiler. Gas producers can be stopped instantly by shutting off their supply of steam and air. The floor space required for their installation is practically that necessitated for steam boilers of equal power. The danger of boiler explosions is eliminated and insurance risks upon the manufacturing plant correspondingly reduced. No heavy foundations are required, as compared with heavy boiler settings. These and many other advantages over the steam-boiler plant are possessed by the gas producer.

The producer-gas plant resembles the steam plant in the fact that coal, or some other combustible fuel, with water, is used in both cases. The difference in application, however, is found in the fact that in the steam plant the heat from the fuel (which is burned in the firebox of the boiler) is conveyed by the steam to the engine cylinder, where it expands and performs work, while in the gas-producer power plant the heat which is evolved from the fuel burned in the gas producer is carried to the gas-engine cylinder in the form of gas, there burned, and also performs work. The relative efficiency of the steam and gas-producer plants is so pro-

nounced as to at once invite attention, and constitutes one of the most striking features of the subject. It is a well-known and authenticated fact that in steam practice only about from 7 to 13 per cent. of the heat value of the coal supplied to the boiler is converted into useful work in the cylinder of the steam engine, whereas in the producer-gas power plant from 22 to 30 per cent. of the heat of the fuel supplied to the gas producer is converted into useful work in the cylinder of the gas engine. This gives the reader some idea of the saving made by the producer-gas power plant as compared with the steam plant. In the comparison just made the highest efficiency of the steam plant, namely, 13 per cent., has for its basis the performance of a plant operating a triple-expansion engine, making the comparison more startling than ever. The cost of a small, complete producer-gas power plant, consisting of both gas producer and gas engine, is in excess of the cost of a steam plant of similar size and power, but the saving in its operation is so large that this additional cost is amply warranted, as it is very quickly eliminated. The cost of a complete producer-gas power plant of from about 1000 horse-power and upward closely approximates that of the large condensing steam plant, while the saving in the cost of operation here obtains in a still greater degree than in the smaller plants. A fuel consumption of from one to one and one-quarter pounds of coal per brake horse-power per hour is quite a common performance for a producer-gas power plant at the present time; indeed, in a number of instances even better fuel economy than this is being obtained. The figures given are reliable, however, and can be depended upon.

In addition to the points of advantage possessed by the component parts of a producer-gas power plant, the gas engine and gas producer, over the steam plant, the producer-gas power plant as a whole has others which strongly recommend it. There is no loss by condensation in pipe lines as with steam piping. A very considerable advantage is here apparent in the fact that producer gas does not condense or lose its power in transmission through pipes from the gas produced to the gas engine; but, on the contrary, the cooler the gas is when it reaches the gas-engine cylinder the better. This condition makes it possible to install several small gas-engine units at different locations throughout a plant supplied from a common gas-producer plant, and consequently eliminates long and expensive lines of shafting.

The large number of producer-gas power plants already in operation at home and abroad; the constant, insistent and intelligent inquiries coming daily from users of power large and small, who appreciate, at least to some degree, the tremendous saving that can be made in the operation of the producer-gas power plant, as compared with the most expensive and best-equipped steam plants, as well as the additional fact that the whole matter has long since passed from an experimental stage to a certainty, presages, now and for the future, the universal use of the producer-gas power plant by conservative manufacturers.

### Bristol's Water System.

The city of Bristol, Tenn., has completed its new water system, which has been under construction for some months past. It has expended approximately 250,000, about \$100,000 of this being for new construction and machinery and \$150,000 for the Bristol-Goodson Water Co.'s plant. The new supply comes from springs located six miles east of the city, and is capable of supplying about 50,000 population.

**AMERICAN BRICKMAKERS.****Convention of the National Body and Allied Organizations.**

[Special Cor. Manufacturers' Record.]  
Columbus, Ohio, February 10.

Representatives of brick manufacturers and allied industries from all sections of the country were here this week for the twenty-second annual convention of the National Brick Manufacturers' Association and its affiliated bodies, the American Ceramic Association, the National Paving Brick Manufacturers' Association and the National Association of Manufacturers of Clayworking Appliances. Nearly 600 delegates were in attendance, and great interest was shown in the many important papers that were read bearing on the principal phases of the industry, together with improvements that have been made both in methods of manufacture and machinery. The principal papers and addresses included those on "The Outlook," by Victor Cushwa, Williamsport, Md.; "The Clay Industries of the Central Ohio District," by Prof. Edward Orton, Jr., Ohio State University; "Electricity as a Power for Clayworking Manufactories," by Lambert Haigh, Catskill, N. Y.; "The Advantages of Forced Draft Over Natural Draft in Burning Up-Draft Kilns," by Joe P. Fulcher, Nashville, Tenn.; "Setting Brick by Machinery," by C. R. Buckles, Coffeyville, Kan.; "The Balance-Sheet of a Down-Draft Kiln," by Prof. A. V. Bleininger, Champaign, Ill.; "Brick and Terra-Cotta in Architecture," by S. Geijsbeek, Seattle, Wash.; "The Survival of the Fittest," by E. C. Kimball, Chicago, Ill.; "The Market Side of the Brick Business," by W. E. Dunwoody, Macon, Ga.; "The Use of Hollow Tile in Dwelling Construction," by J. E. Mecusker, Warren, Pa.; "Our Inland Waterways and Their Influence on the Clay Business," by J. W. Robb, Clinton, Ind., and "Strength of Brick," by J. A. Howard, Watertown, Mass.

In conjunction with the convention an exhibition room was provided to enable members to display samples of clay wares, specimen brick, trade literature, models of machinery and appliances. This opportunity to bring their improved products before the attending delegates was taken advantage of by a number of manufacturers, and included among them may be mentioned the following:

The Fernholtz Brick Machinery Co. of St. Louis, represented by W. L. Rodgers, exhibited a model of a four-mold brick press and a model of a hand-power press for making ornamental designs.

The Scott Manufacturing Co. of St. Louis, represented by Wm. F. Scott of St. Louis and J. W. N. Dickinson of Keokuk, Iowa, made no machinery exhibit, but had plenty of printed matter and distributed a useful souvenir in the shape of a pencil and pen holder.

C. W. Raymond Company, Dayton, Ohio, was represented by G. M. Raymond, C. W. Raymond, Jr., D. H. Downey, G. W. Nushaw, I. M. Justice, all of Dayton; Geo. H. Smith of Kansas City and H. G. Lang of New York. The souvenir which it distributed was a stein, a handsome example of clayworking, and Raymond machinery was used in their production.

The Arthur Koppel Company of Pittsburgh, Pa., represented by A. P. Dodds of Pittsburgh and Henry Robiczek of New York, exhibited a dump car, turntable and section of portable track, and showed its general line of manufactures by models.

The Chase Foundry & Manufacturing Co. of Columbus, Ohio, represented by S. M. Chase, distributed catalogues and showed photographs of their cars, track, turntables, switches and trucks.

Chambers Bros. Company of Philadelphia, represented by J. H. Chambers, A.

R. Root, E. R. Frazier and C. J. Newman, exhibited a full-size automatic side brick cutter. This is a brand-new machine brought out last year, and attracted considerable attention.

Illinois Supply & Construction Co. of St. Louis, represented by W. P. Grath, exhibited models of the Grath special hand-power machine and the Grath special four-mold and five-mold power presses.

The Matthews Gravity Carrier Co. of St. Paul, Minn., exhibited a section of its roller-bearing machine.

American Blower Co. of Detroit, represented by Alex. A. Scott and W. W. Wallace of Knoxville, Tenn., and E. H. Vitalius of Detroit, exhibited a model of the "Scott Continuous Producer Gas-Fired Kilns." As a souvenir they distributed a plaque which elicited enthusiastic approval.

E. M. Freese & Co., Galion, Ohio, made no exhibit beyond what could be shown by photographs, and were represented by H. H. Freese, R. A. Whiston, J. J. Gledhill, H. L. Irwin and B. E. Place.

Luce Engineering Co. of St. Louis had in attendance G. E. Luce, Marion Blair, E. C. Peper and Peter B. Gibson.

Richardson-Lovejoy Engineering Co. of Columbus were important factors in the success of the convention. Mr. Lovejoy was vice-chairman of the local committee, a member of the executive committee and chairman of the exhibits committee, while Mr. Richardson was chairman of the reception committee.

The Oakland Pressed Brick Co. of Zanesville, Ohio, represented by R. H. Rutherford and W. H. Rutherford, displayed specimens of its fancy face brick.

The Anderson Foundry and Machine Works of Anderson, Ind., was represented by W. N. Durbin.

The Thew Automatic Shovel Co. of Lorain, Ohio, represented by D. D. Deeds, made no exhibit, but distributed printed matter.

St. Louis Terra-Cotta Co. of St. Louis was represented by R. F. Grady.

Laclede-Christy Clay Products Co. of St. Louis, represented by Fred Talbot, general superintendent of the Laclede plant, and J. A. W. Schoedel, general superintendent of the Christy plant.

American Clay Machinery Co. of Bucyrus, Ohio, had a number of representatives present. They displayed models of various machines in operation and distributed as a souvenir a handsome watch fob.

Henry Martin, Lancaster, Pa., had a large model representing his system of steam drying.

Main Belting Co., Philadelphia, showed samples of Leviathan belting.

The manufacturers of face brick in Ohio have been considering the advisability of effecting an organization to push the industry and further their mutual interests, and to this end a conference was held during the convention. Between 25 and 30 manufacturers were represented. A committee was appointed to arrange a plan and present it at a meeting to be held in Columbus at the Chittenden Hotel February 25, when a permanent organization will be made with the name of the Ohio Face Brick Association. The members of the committee, so far as can be ascertained, are R. H. Rutherford, Zanesville; J. M. Adams, Lincoln G. Kilbourn, S. M. Gould, Columbus, and R. L. Queisser, Cleveland. A. C. BOUGHTON.

**Corsicana's Streets.**

During the last five years Corsicana, Texas, a city of between 10,000 and 12,000 people, has built more than 20 miles of brick sidewalks, according to Street and Sanitary Commissioner C. H. Allyn. Mr. Allyn is now planning to have a four or

five-foot brick or cement walk and a 24-foot grass plot to the curb of the 80-foot streets of the city, leaving a 30-foot roadway and giving the streets a park-like

**RALEIGH AT WORK.****Several Undertakings Being Pushed Through This Winter.**

[Special Cor. Manufacturers' Record.]

Raleigh, N. C., February 6.

Here in Raleigh the work on the street railway has been pushed throughout the winter, which has been very open.

Work on the Masonic Temple here has gone on without interruption through the winter, and the building is to be turned over complete by July 1. In it will be the offices of the Jefferson Standard Life Insurance Co. and the North Carolina Home Fire, and also those of the Chamber of Commerce. The building will be the largest structure of its kind in the State, and is of reinforced concrete, seven stories in height, and will have a roof garden. The main auditorium will seat about 1000, and there is a small one with a seating capacity of about 250. The building is faced with Indiana limestone.

The Agricultural and Mechanical College, where a great many improvements have been made during the past 12 months, is contracting with the city for a water supply and fire protection, and the Wake Water Co. will do this work, the special session of the Legislature having appropriated \$10,000 for it.

One of the special attractions of the city, and, indeed, of the State, is the great museum, so largely industrial in its character. There are visitors daily, and these come from many States. The collection is now much more complete than ever before, and embraces agricultural products, horticultural, minerals, ores, gems, economic gem stones, woods, animals, including a wonderful show of game fowl, fish, etc., building stones and a notable show of kaolin and of pottery made from it in this State being the principal kaolin mines as well as those of mica, talc, tin, monazite. Charles J. Harris is known as the kaolin king, and State Senator Burleson as the mica king, these two men practically controlling the output of these products. The kaolin goes to the great chain of potteries, all the way from Trenton, N. J., to East Liverpool, Ohio. There will be a display of cotton goods of all kinds, this to be made by the mills of the State, which now exceed 400 in number, including spinning and weaving, knitting, etc. There is also a display of furniture, North Carolina now taking the second place in the United States in the manufacture of this line.

The new high school is now receiving the finishing touches. Raleigh has the distinction of having over 7000 pupils in its private and public schools, colleges, universities, etc., these representing over 20 States and several foreign countries.

The Electric Bond & Share Co. has completed work at Buckhorn Falls, on the Cape Fear river, 26 miles from here, and the Chamber of Commerce is taking up the matter of having power wires run to Raleigh in order to get cheap power. Several mill men have already stated that they desired this. The plant develops about 4000 horse-power, of which perhaps half will be available here. As yet the figures cannot be given exactly. Should more power be needed it is available a little further up the stream which furnishes that at Buckhorn Falls. Raleigh now gets some electric power, about 1000 horse, from Milburnie, on Neuse river, six miles from here, the street railway taking part of this. The street railway is very desirous of getting power from Buckhorn. The Chamber of Commerce has begun the preliminary work as to this power, and it will

give splendid opportunities for a number of small industries. The organization is also taking up public road improvements within a distance of six miles from Raleigh, in order to have the roads within that limit laid with macadam, trap rock to be used to a considerable extent. On all the roads except one or two there are large beds of granite readily available for metalling. F. A. OLDS.

**Cotton Mill for California.**

[Special Cor. Manufacturers' Record.]

Los Angeles, Cal., February 6.

Cotton mills in California may sound strange to the Southern and Eastern cotton grower and manufacturer, but plans for a \$400,000 plant at Los Angeles to make staple goods are completed and capital is rapidly pushing the project. The enterprise is being promoted by Denis Howarth of the Chester (Pa.) Manufacturing Co. and a director of the Woodstock Cotton Mills, Anniston, Ala. Mr. Howarth has been in Los Angeles, Cal., for three months arranging details, and has identified himself with several prominent capitalists, principal of whom is A. H. Beach.

Few people are aware that in the Imperial valley cotton growing is gradually being developed in commercial quantities. The greater portion of the supply for the first few years of the industry in Los Angeles will be taken from the Texas fields, which are the nearest points of shipment.

According to Mr. Howarth, California dealers in cotton merchandise have signified their ardent support, and there will be nothing at all experimental in the enterprise. He will take charge of the mills, and experienced men from the East will superintend the various departments. The first plans demonstrate that an output of \$50,000 worth a month will be possible from the start.

The plant site is on the river front, and three railroads, the Southern Pacific, the Santa Fe and the Salt Lake, all have their main tracks in the vicinity. The principal building, of brick, will contain carding, spinning and weaving rooms. A laundry plant and dyerom will occupy another building. There will also be several warehouses and an office. The entire plant will cover about three acres. The machinery is already under construction.

The labor problem is one of the difficulties always confronting the manufacturer, but here, as in the East, cheap hands are obtainable among the Russians and several other foreign nationalities who have settled in large colonies in Los Angeles and its environs. Many of these people have at present no set occupation, but depend principally on rough work in the lumber yards, the factories and on the farm, and will gladly take up a steady position at low wages. Taking all things into consideration, the new plant for bringing cotton from its raw state to the finished product has a most optimistic outlook and a very wide field. JOS. D. MINSTER.

**SWAMP DRAINAGE BY BORE HOLES**

By J. FREDERICK MUNN, M.E.

[Written for the Manufacturers' Record.]

I have read the matter submitted by Mr. Cope in the MANUFACTURERS' RECORD relative to swamp drainage by bore holes. From the experience I have had along this line on a small scale the suggestion is certainly worth consideration, and there is no doubt in my mind but that a large part of the Louisiana swamp lands could be successfully drained, if not all of it, by this method, and the cost of doing it in this way would be an item of considerable interest, as the boring of holes would cost but a fraction to that of open ditches, and the saving of bridges, land, etc., would enter very largely in favor of the bore



through in time appreciably to relieve the congestion of our great freight-carrying lines of railroads. The work should be systematically and continuously carried forward and in accordance with some well-conceived plan. The main streams should be improved to the highest point of efficiency before the improvements of the branches are attempted."

The route via Tennessee and Chattahoochee rivers by channels and canals, the same in depth as that of the Ohio river, is feasible. The greatest freight-producing regions in the United States, next to the Ohio river country, are the Tennessee and Coosa rivers country and the mountains of coal and iron around Birmingham and Anniston. It is said that at present coal cannot be shipped by rail—350 miles—from Birmingham to New Orleans in competition with coal by barges 2000 miles from Pittsburgh to New Orleans.

Nashville, Knoxville, Chattanooga, Rome, Ga.; Birmingham, Anniston, Mobile, Montgomery, Columbus, Pensacola, etc., would group themselves immediately for the direct benefits of the Tennessee, Chattahoochee and Alabama rivers route.

The Great Lakes and Ohio river country from Pittsburgh to Paducah and Cairo are "the pent-up Uticas," which sorely need an adequate inland waterway to the Gulf. If an interchange of benefits could be had between the Lakes and Ohio river country, and the section and resources in the South through which the route under discussion can be had, this in itself would be a most formidable circumstance. Hon. Jas. W. Browne, delegate from the Pittsburgh Chamber of Commerce, in speaking before the National Rivers and Harbors Congress (1906), said: "Ten years ago the great product of steel for ordinary commercial purposes was Bessemer, and Bessemer ores were sought far and wide throughout the country. Today the great production is basic steel, and basic furnaces and basic steel is today exceeding in production the Bessemer. We could use a very much lower grade of iron ore for basic steel. I believe today if the improvements in the Ohio, on the Tennessee and on the Cumberland rivers were completed we might get a great deal of basic iron from the South."

Cleveland, Ohio.

### FROM LAKES TO GULF.

#### A Suggested Route by the Tennessee and Chattahoochee Rivers.

Editor Manufacturers' Record:

Any Lakes-to-the-Gulf inland waterway, both from Lakes Erie and Michigan and the entire Ohio river, 950 and 1000 miles from Pittsburgh to Paducah and Cairo, respectively, would pass en route to the Gulf the last-named localities.

The distance from Paducah up the Tennessee river to Guntersville, Ala., is 300 miles; from Guntersville to Gadsden, on the Coosa river, the distance by a canal surveyed by United States army engineers would be 50 miles; from Gadsden down the Coosa river to Wetumka, Ala., 160 miles; up the Tallapoosa and its tributaries within about 60 miles nearest to Columbus, and thence a canal from about Marvyn, Ala., 30 miles to the Chattahoochee river at Columbus; thence 255 miles down the Chattahoochee to Apalachicola, Fla.; total distance from Cairo to Apalachicola, 905 miles; from Paducah to Apalachicola, 855 miles.

Congressman Ransdell, who is president of the National Rivers and Harbors Congress, in a speech on the rivers and harbors appropriation bill in the House of Representatives January 1, 1907, showed and implied in all he said that the one great primary object is "connecting our great inland seas and their many large and wealthy cities with the Gulf of Mexico, Panama canal and the Orient by the best and shortest route."

President Roosevelt, in urging upon Congress in his recent annual message a great inland waterway from the Lakes to the Gulf, says: "Such a waterway would practically mean the extension of our coast line to the very heart of our country. If begun at once it can be carried

through in time appreciably to relieve the congestion of our great freight-carrying lines of railroads. The work should be systematically and continuously carried forward and in accordance with some well-conceived plan. The main streams should be improved to the highest point of efficiency before the improvements of the branches are attempted."

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The Great Lakes and Ohio river country from Pittsburgh to Paducah and Cairo are "the pent-up Uticas," which sorely need an adequate inland waterway to the Gulf. If an interchange of benefits could be had between the Lakes and Ohio river country, and the section and resources in the South through which the route under discussion can be had, this in itself would be a most formidable circumstance. Hon. Jas. W. Browne, delegate from the Pittsburgh Chamber of Commerce, in speaking before the National Rivers and Harbors Congress (1906), said: "Ten years ago the great product of steel for ordinary commercial purposes was Bessemer, and Bessemer ores were sought far and wide throughout the country. Today the great production is basic steel, and basic furnaces and basic steel is today exceeding in production the Bessemer. We could use a very much lower grade of iron ore for basic steel. I believe today if the improvements in the Ohio, on the Tennessee and on the Cumberland rivers were completed we might get a great deal of basic iron from the South."

Lyman E. Cooley, in his address to the National Rivers and Harbors Congress (1906), said: "Waterways can be carried from the Tennessee into the Alabama river system, thus reaching the eastern coast of the Gulf," and, in connection with the continental waterway policy, Mr. Cooley further said: "No such opportunity was ever elsewhere presented to man."

The entire distance between Columbus and West Point, Ga., is available for large water-power development, and is within the scope of the President's message where he says: "The Government dams should be used to produce hundreds of thousands of horse-power as an incident to improving navigation, for the annual value of the unused water-power of the United States perhaps exceeds the annual value of the products of all our mines."

At Muscle Shoals, on the Tennessee river, the Government has already built, at cost of more than \$3,000,000, a canal with 11 locks, 16 miles long and six feet deep. If Atlanta should come down the Chattahoochee she can connect with a large, comprehensive and main interstate system by a distance of 138 miles; it would leave Atlanta's seaport on the Gulf over 300 miles nearer to the Panama canal than at any other on-tidewater. Macon can descend the Ocmulgee to about Hawkinsville, and thence by an easily-constructed canal to Flint river about Oglethorpe or Montezuma, and thence to the junction of the Chattahoochee and Flint, making the Apalachicola river. Via

Albany to the Apalachicola river Macon's union with the main system at the head of the Apalachicola river places her over 300 miles nearer to the Panama canal by Apalachicola than at any other tidewater.

It is confidently submitted that the route from Paducah via Tennessee, Coosa and Chattahoochee rivers to the Gulf, in which both Atlanta and Macon can be economically included, and upon which, from Atlanta to Columbus, Newnan, Carrollton, Lagrange and West Point will be in direct alignment, is a route most copious in the great material interests that it will subserve. It is a route by its unification of the Tennessee and Chattahoochee rivers, with resulting benefits for populations in cities and States exceeding one-half of the population of the United States. There should be organization for its promotion, and it should be called "from the Lakes to the Eastern Gulf coast system." By reason of its equal integration of the upper Mississippi, Lake Superior, Chicago and St. Louis, and Lake Erie and the Ohio river systems, including Cincinnati, Covington, Louisville and other cities, it can marshal for its support on its merits a numerical and political strength that an inland waterway should command and deserve.

The City Council of Columbus, Ga., in November last passed resolutions asking for an appropriation for a United States survey of the Tennessee, Coosa, Tallapoosa and Chattahoochee rivers route to the Gulf. Copies of these were sent to President Roosevelt, to Mr. Burton, chairman of the Rivers and Harbors Commission; to Senators Bacon and Clay and to Congressman William C. Adamson of Georgia. An appropriation of this kind was made at the last Congress for a survey and report of the route from Cairo, 764 miles to the mouth of Red river, and thence 300 miles to the mouth of the Mississippi.

Congressman Ransdell of Louisiana, and president of the Rivers and Harbors Congress, in his speech on the river and harbor appropriation bill in the House of Representatives, January, 1907, in speaking of the slackwater navigation of the Ohio, 1000 miles from Pittsburgh to Cairo, said: "Out of the 52 locks and dams provided in this project, only five have been completed and four others in process of construction. The project has been changed to a nine-foot depth instead of six, and the estimated cost of completion is \$63,000,000." The unit of depth of any continuation of the Ohio channel to reach the Gulf either from Paducah or Cairo should be the same as that of the Ohio from Pittsburgh to Cairo. The distances on the Chattanooga, Tallapoosa and Tennessee rivers (including the enlargement at Muscle Shoals, 16 miles, from a six to nine-foot depth), which are now open to navigation, ought to be half the cost in proportion of the estimated cost for the 1000 miles on the Ohio.

Major Walter McFarland of United States engineers, in his report in 1872 on the Coosa and Tennessee rivers, said: "The Tennessee river is navigable from Florence, Ala., to Paducah, Ky., at its mouth, 200 miles distant, by the largest class of Western river steamers, while the same may be said of that portion of the river lying between Muscle Shoals and Chattanooga, 200 miles in length. The rise enables large vessels to pass up to Knoxville, 200 miles above Chattanooga. The Tennessee itself is a broad, deep and beautiful stream, with more water than the Ohio, and with a permanent bed, its obstructions consisting almost exclusively of rock reefs, with little or no gravel, which prevents the formation of the shifting bars which obstruct the navigation of most of the Western rivers.

"It passes from Southern Virginia and

Western North Carolina through the fertile valleys of Eastern Tennessee, Northern Alabama and Western Tennessee and Kentucky and by Northwestern Georgia and Northeastern Mississippi.

"It is not wonderful that its value as a highway for commercial purposes should have attracted the attention of our statesmen, who saw in its opening a means of developing enormously the population, wealth and resources of one of the richest agricultural and mineral regions which the United States possess." (See Ex. Doc. No. 243, Forty-second Congress, second session, page 11.)

From Paducah to Guntersville (300 miles); on the Tallapoosa from Wetumka to the river's projection nearest to and about (40 miles) due east toward Columbus, and the Chattahoochee from Columbus (255 miles) to Apalachicola have all been surveyed and are navigable distances. Of the 855 miles from Paducah to the Gulf, these last distances make 595 miles. The distance by the tributaries of the Tallapoosa and canal (some 30 miles) to Columbus is the only link that has not been surveyed. The soil and topography of this link seem so favorable that our opinion is it would be both an easy and inexpensive piece of work.

The 50 miles of canal between Guntersville and Gadsden have been surveyed; locks and dams have been built south of Gadsden to within 116 miles of destination at Wetumka. These last distances compose only 260 miles of the whole distance, 855 miles, from Paducah. When in times past in the reports of the United States engineers nearly all of the 855 miles have been so strongly recommended for local navigation advantages, their reappraisal at this later period with a great interstate and international system from the Lakes to the Gulf and the Panama canal is now of sovereign significance.

By any other route than down the Coosa the distance by water from Knoxville, Chattanooga and kindred territory and most of the Tennessee and Coosa rivers country would be greater by 900 and 1000 miles to the Gulf and Panama canal. And thence to Havana, Cuba, over 170 miles can be added. From Wetumka to the Gulf via Alabama river or Chattahoochee river the distance is practically the same. When the system is brought to Wetumka there would be a co-ordination for its extension via Montgomery and Columbus, respectively. As above explained, the waters of the Tennessee, Coosa, Tallapoosa, Chattahoochee and Alabama rivers can be made to unite into a continuity of terminals to the Gulf, and thence to the Panama canal, which is authoritatively claimed would be devoid of 90 per cent. of its value and usefulness to the commerce of the United States unless one or more deep waterways shall connect the Great Lakes and Ohio river with the Gulf.

CHARLES JEWETT SWIFT.

Columbus, Ga.

### Coal in 1907.

The production of coal in the United States in 1907 amounted to between 450,000,000 and 460,000,000 short tons, according to returns received by the United States Geological Survey. In the review of the year by the survey it is pointed out that it is possible that full returns may show that Illinois has again assumed second place among the States in coal production, and that West Virginia is third. In Eastern Kentucky, Tennessee and Alabama the production in 1907 is estimated to have been about 10 per cent. in excess of that of the preceding year, and in Western Kentucky that there has been comparatively little increase over the record-breaking tonnage of 1906. In Arkansas coal mining in 1907 was to a consid-

erable extent a repetition of the preceding year, and the same may be said about the bituminous fields of Texas, in which State the production of lignite had an increase of about 10 per cent.

#### Southern Products Widely Distributed

The wide distribution of Southern manufactures is well indicated in the following report from the DeLoach Mill Manufacturing Co. of Bridgeport, Ala.:

"We recently shipped to Maine one of our No. 2 sawmills, 40-horse-power boiler and engine. We have made many other shipments to Maine, but this was one of the largest and most complete outfits. In January we shipped three new sawmills to one concern in Hamilton, Ont., and it was so pleased with the first shipment that on January 30 we shipped it two solid carloads of 16 sawmills. We shipped to our Vancouver (B. C.) agents a solid carload of mill machinery, consisting of five sawmills, two of which were large double mills, one planer, several edgers and cut-off saws. We are shipping to Canada almost daily, and we have shipped to Mexico. In the last 30 to 60 days we have shipped over \$9000 worth of machinery to La Guayra, Para and Buenos Ayres. The outfit shipped to Buenos Ayres consisted of six large double sawmills, with six log-turners, 16 circular and two drag saws. In regard to our machinery shipped to South America, we have received some highly complimentary letters, and we are continually receiving additional orders from the purchasers. We shipped to Manila alone one of our large sawmills for use in the navy-yard there, and have other orders on file for same point. We are shipping considerable material to Cuba, and recently shipped a sawmill to Mazanillo and two planers to Havana to be used in manufacturing cigar boxes. The last shipment we made to California consisted of a No. 2½ sawmill of latest improved pattern, forwarded to Los Angeles."

#### Will Distribute 56,000 Horse-Power.

It is understood that the Chattanooga-Tennessee River Power Co. has arranged for continuation of the construction of its water-power-electrical plant at Hales Bar, on the Tennessee river, 12 miles below Chattanooga, Tenn. Besides providing a large modern power development, this plant will insure the permanent improvement of river navigation. The MANUFACTURERS' RECORD has previously stated details of the enterprise. The company is building a dam 1200 feet long, 50 to 60 feet above rock bottom of river, and a 60x320-foot power-house arranged for 14 separate units, each of 4000 horse-power. Ten units will be installed at first. Electricity will be transformed to 60,000 volts, then transmitted to a substation near Chattanooga and transformed to a voltage suitable for manufacturing and lighting plants. There will be a double transmission line, each to contain three copper cables supported on steel towers 500 feet apart. United States engineers and the company's engineers prepared the plans for construction, and these were approved by the Government. Anthony N. Brady of New York is largely interested in the company, and Col. John Bogart, 16 Exchange Place, New York, is the consulting engineer. It is reported that contract for continuing construction has been awarded to the Wilson & Baillie Manufacturing Co. of 85 9th street, New York.

#### Another Water-Power-Electrical Development.

It is stated that the Granite Manufacturing Co. of Marble Falls, Texas, has completed plans for organization with an initial capital stock of \$300,000 and G. W. Voires manager. This company is plan-

ning to develop the water-power of the Colorado river by constructing a reinforced-concrete dam about 1100 feet long. A natural dam will be utilized and concrete will fill the crevices, the height of the masonry to vary from 10 to 18 feet. The dam is expected to develop 12,000 horse-power, which it is proposed to transmit by electricity to various cities and towns, including San Antonio, which is 150 miles distant. John W. Maxcy of Houston, Texas, is the engineer in charge for the company, and he is now preparing plans and specifications.

The Atlantic and Great Western Canal Association, having as its object the construction of a waterway connecting the Mississippi river and the Atlantic, has been organized at Atlanta with Messrs. George Hillyer, president; W. C. Cooper of Atlanta, secretary and treasurer; C. P. Goodyear of Brunswick, Tomlinson Fort of Rome, O. R. Eve of Augusta, W. E. McCaw of Macon, L. H. Chappell of Columbus, J. Pope Brown of Hawkinsville, W. B. Stilwell of Savannah, W. P. Lay of Gadsden, John T. Wilder of Knoxville, W. J. Kincaid of Griffin, Harry Hodgson of Athens and John J. Betjamen of Albany, vice-presidents.

The Commercial Club of Corsicana, Texas, has elected as directors for the year Messrs. F. Y. Doke, M. P. Caldwell, J. E. Butler, F. M. Cheney, J. T. Coulson, P. C. Townsend, R. E. Montgomery, Joe Schwartz and Carter Kirven, Jr. F. Y. Doke was elected president; P. C. Townsend, secretary, and J. B. Slade, assistant secretary.

The Board of Trade of Nashville, Tenn., has elected Messrs. Robert L. Burch, president; E. M. Foster and L. Jonas, vice-presidents; E. S. Shannon, secretary; R. L. Eastman, assistant secretary, and H. H. Nance, treasurer.

Full of the Jacksonville spirit and of facts bearing upon the progress of that city is the annual address of President Charles E. Garner of its Board of Trade, which is being circulated in attractive pamphlet form.

Announcement is made that the first cargo of Coban copper ore brought to Norfolk for reduction has reached there, consigned to the Eustis Smelting Works of West Norfolk. The cargo consists of 4500 tons.

Col. Charles A. Carlisle of the Studebaker Brothers Manufacturing Co., South Bend, Ind., is advocating instruction in manual training, agriculture and domestic science in the district school of his State.

It is proposed to spend \$750,000 in building in Mississippi county, Arkansas, a drainage ditch 31 miles long with about 40 miles of laterals to drain 200,000 acres of land.

Mr. H. H. Richardson has been elected secretary of the Board of Trade of Jacksonville, Fla.

The Georgia School of Technology is planning to open next month a night trade school.

The Interstate Mantel and Tile Dealers' Association is in session this week at Louisville, Ky.

*Managers of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the MANUFACTURERS' RECORD. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.*

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### WASHINGTON-ANNAPOLIS.

#### Electric Railway Begins Operation—Main Line to Baltimore Opens Soon.

The Washington, Baltimore & Annapolis Electric Railway Co. began operating its line between Annapolis, Md., and Washington, D. C., on February 7, and it is expected to open the line between Baltimore and Washington some time in March. The company is now running high-speed electric cars at intervals of two hours, but the time will be shortened as business increases. The schedule between Baltimore and Washington, where traffic will naturally be much heavier than between Annapolis and the Capital, is not yet announced.

The company has a double-track road from Lexington and Liberty streets, in the shopping center of Baltimore, to 15th and H streets N. E. in Washington, D. C., a distance of 37½ miles. The main line is intersected at Naval Academy Junction, 15½ miles from Baltimore, by the company's single-track road running from Annapolis to Annapolis Junction on the Baltimore & Ohio Railroad, 20½ miles, but also crossing the Pennsylvania Railroad at Odenton, which is slightly more than half a mile west of Naval Academy Junction. The company also has a single-track line from Berwyn to Laurel, Md., nine miles. The cars running between Annapolis and Washington proceed over the branch line from Annapolis to Naval Academy Junction, and thence over the main line to Washington. The terminus at Washington is at the corporate limits of the city, but direct connection is made with special cars of the Washington Railway & Electric Co. which will convey passengers through the city as far as the Treasury building. It should be noted that the section of main line lying between the boundary of the District of Columbia and the terminal at 14th and H streets, four miles, belongs to the Washington Railway & Electric Co., although it is continuous with and practically part of the road to Baltimore. The Berwyn & Laurel line connects at Berwyn with the Washington Railway & Electric Co.'s road, which runs direct to the Treasury in Washington. It is proposed to complete the system at some future time by building an extension of about five miles from Laurel, Md., to connect with the Annapolis line at Annapolis Junction. At present there are over 96 miles of track.

The main line is laid with 80-pound A. S. C. E. 33-foot rails on 6x8-inch by eight-foot chestnut ties, and is ballasted with gravel. The maximum grade is 2 per cent. with one exception, this being the approach in Baltimore to the elevated structure, this being 5.7 per cent. grade and about 500 feet long. The maximum curve is 8 degrees, but there is only one of this degree of curvature, a majority of the curves being 1 degree or less, and 79 per cent. of the main line consists of tangents. There is one practically straight run of 11 miles. Leaving the terminal in Baltimore, the cars operate over the city streets about a mile and a half, the rails being Pennsylvania Steel Co.'s section 273, 125-pound 50-foot girder type.

The elevated road, starting at the foot of Scott street, crosses the main line of the Baltimore & Ohio Railroad at a height of 22 feet by means of a 115-foot, 6-inch through Pratt truss. This is the beginning of a series of three steel viaducts, by means of which a safe and rapid entrance into Baltimore is obtained. The viaducts aggregate approximately one-half mile in

length, and are separated by fills. The total distance from the north end of the elevated structure to the south end is approximately a mile and a half, and crosses several railroads and streets, besides Gwynn's falls. South of the elevated structure are two tunnels, rectangular in cross-section and built of reinforced-concrete sides and roof. The north tunnel is 88 feet and the south tunnel 270 feet long. They are connected by retaining walls 103 feet long. They were constructed by making an open cut with a steam shovel, the concrete being then placed and the structure being back-filled upon completion. There are no grade crossings of either steam or county roads on the main line, excepting two public road crossings. The longer spans, such as the Patapsco river and the Big and Little Patuxent river and the Pope's Creek branch of the Pennsylvania Railroad Co. near Bowie, Md., are crossed by steel viaducts.

The overhead trolley work is of catenary construction, there being a messenger cable of three-eighths inch high-strength steel supporting the trolley wire of Four 0 copper. The pole spacing is 150 feet, and each pole is back-guyed. Wire cables also run across from pole to pole on opposite sides of the line, making practically a truss construction. Chestnut poles are used on the main lines with a standard height of 35 feet. In the city there are iron poles.

The cars on the line are very handsome, and in exterior appearance resemble a Pullman coach. Each is 62 feet long, and will seat 64 passengers. The outside coloring is dark green, with gold lines. Inside the woodwork is of Brazilian mahogany, and the seats are of leather. The ceiling is olive green, trimmed in gold. There is an electric light over each seat. There are 25 cars, of which 21 are furnished with four 175-horse-power motors each, two on each truck. The other four cars have two motors each, and will be devoted to local service. There are also two electric locomotives. The cars are of the finest type of electric-railway equipment.

The road was built and the equipment designed under the supervision of the Roberts & Abbott Engineering Co. of Cleveland, Ohio.

The Baltimore terminal building is at Liberty and Marion streets, and extends from Liberty street to Park avenue, the cars entering on Liberty street and running through the station and out on Park avenue. The building is built of reinforced concrete throughout, with brick and stone facings. The car shops and sub-power station are located at Naval Academy Junction, the main power station being at Washington, where power is supplied by the Potomac Electric Co.

The officers of the railroad company are: President, George T. Bishop; vice-president, John Sherwin; second vice-president and general manager, J. N. Shanahan; secretary and assistant treasurer, W. A. Kappler; treasurer and assistant secretary, C. F. Gladfelder.

### Southern Pacific Report.

The twenty-third annual report of the Southern Pacific Company, covering the fiscal year ended June 30, 1907, has been issued in pamphlet form, and shows that the gross transportation receipts of rail and water lines were \$124,942,797, an increase of \$19,310,248; operating expenses were \$80,220,800, an increase of \$12,090,907; taxes were \$2,896,501, an increase of \$432,205; receipts over operating expenses and taxes \$41,825,496, an increase of \$6,778,135. The addition of other income makes a surplus of \$46,783,102, an increase of \$8,411,070. Deducting total fixed charges, amounting to \$17,185,511



(which showed a decrease of over \$643,000), there was left a surplus over fixed charges of \$29,597,590, an increase of \$9,054,805. Other charges reduced the surplus to a net of \$27,698,593, an increase of \$8,505,945. The company operates 9400 miles of line, an increase of 209 miles during the year. This includes several thousand miles of lines in Texas and Louisiana.

The capital expenditures included about \$195,000 on the extension from Stockdale to Cuero, Texas; \$1,097,000 for the extension from Mexia to Elleva, Texas; over \$28,000 for the extension from Eunice to Mamou, La.; over \$5000 on the extension from Raceland to Lockport, La.; over \$557,000 on the line from Lafayette to Port Allen, La.; over \$129,000 on the extension from Arnaudville to Port Barre, La., and more than \$25,000 on the extension from Bayou Sale to South Bend, La. There was spent on the extension to Port Arthur, Texas, nearly \$84,000, exclusive of survey. Automatic signals were also installed to cover about 355 miles of line at various points in Louisiana and Texas. A brick passenger station is also built at Cuero, Texas, at a cost of \$14,500. About three miles of second track was constructed between Shriever and Thibodeaux, La.

The company has 1759 locomotives, an increase of 92; 1707 passenger cars, an increase of 54; 43,757 freight cars, a decrease of 527; 4517 road-service cars, an increase of 496.

The receipts from passengers were \$33,636,376; from freight, \$76,357,765. The average receipts per passenger per mile were 2.287 cents, and the receipts from freight per ton per mile were 1.105 cents, each of which shows an increase.

#### Atlanta-Carolina Electric Railway.

The Atlanta & Carolina Construction Co., which is to build the proposed electric railway from Atlanta to Augusta, Ga., and which was lately granted a franchise in Augusta, will, it is reported, probably begin construction about March 1. When completed the line will connect with the Augusta Railway & Electric Co.'s road, and over that to the line from Augusta to Aiken, S. C., which is to be extended from Aiken to Columbia, S. C. The plan thus proposes an electric railway from Atlanta via Augusta to Columbia, about 300 miles. The route proposed from Atlanta is via Lithonia, Conyers, Monroe, High Shoals, Athens, Lexington and Washington, Ga., to Augusta. It is said that the cars will be equipped with a new device which will enable each car in a train to operate its own motors, although connection with the trolley wire will be made by only the forward car. A special design of trolley is to be used, and it is said possesses peculiar advantages.

#### Appointments.

It is reported from Houston, Texas, that W. M. Hobbs, vice-president and general manager of the San Antonio & Aransas Pass Railway, has been appointed general superintendent of the Southern Pacific lines in Louisiana, with office at New Orleans, succeeding Mr. E. B. Cushing, who has been assigned to the position of construction engineer in charge of the building of the Southern Pacific's line between Lafayette and Baton Rouge, with headquarters at Houston, Texas. J. S. Peter has been appointed general manager of the San Antonio & Aransas Pass Railway, to succeed Mr. Hobbs.

It is reported from Atlanta, Ga., that Alexander Bonnyman, chief engineer of the Atlanta, Birmingham & Atlantic Railway, has been appointed general manager and will assume the duties of that office on February 15. President Atkinson has performed the duties of general manager for

several months since the resignation of Mr. Wadley.

#### The Watauga Railroad.

Concerning the survey recently made from Edgemont, N. C., a terminus of the Caldwell & Northern Railroad, to the top of the Blue Ridge in Watauga county, Mr. J. R. Ervin, consulting engineer, Lenoir, N. C., writes the MANUFACTURERS' RECORD that the Watauga Railroad Co., which was chartered at the recent special session of the North Carolina Legislature, will probably adopt the line surveyed and after the organization of the company in March will likely have a location made and may begin construction this year. "The success of the enterprise," he says, "depends largely on the amount of subscriptions in bonds from the county and townships of Watauga county and from the citizens' incorporation interested in this development. Watauga county, although one of the richest counties in the State, has no railroad, and its enterprising citizens are very much alive to the importance of this undertaking."

#### Rails, Equipment, Etc.

The Pennsylvania Railroad Co. has ordered 55,000 tons of steel rails for 1908 delivery. It is further said that the company has 30,000 tons left over from its order for 1907. The new order is expected to be filled according to new specifications by the United States Steel Corporation, the Cambria Steel Co., the Pennsylvania Steel Co. and the Lackawanna Steel & Iron Co.

The Montgomery Traction Co. of Montgomery, Ala., has ordered eight double-truck convertible cars from the J. G. Brill Company, Philadelphia.

The San Antonio & Aransas Pass Railway is receiving deliveries on an order for 12 locomotives purchased from the Baldwin Works.

The Norfolk & Western Railway, it is reported, has placed an order for 6000 tons of steel rails.

#### Southern Shops at Coster.

The Southern Railway Co. is installing machinery in its new shop at Coster, near Knoxville, Tenn. This machine shop is 750 feet long and 150 feet wide, built with concrete foundation and walls of brick and steel, with slate roof. The floor is of concrete. Windows are in the roof as well as in the walls. Two tracks run the entire length of the building, the machinery of which will be operated by electricity. There are two traveling cranes overhead. The old machine shop has been enlarged and will be used as a boiler shop after the new machine shop is occupied. The coach and paint shop has been doubled in size, and the addition will be ready for use as soon as the concrete floor is laid. The roundhouse has also been enlarged to twice its former capacity.

#### Officers Elected.

The MANUFACTURERS' RECORD is informed that at a meeting of the board of directors of the Dallas Interurban Electric Street Railway Co. on February 4 officers for the ensuing year were elected as follows: Henry Dorsey, president; I. J. Willingham, first vice-president; Robert Ralston, second vice-president; M. H. Wolfe, third vice-president; W. W. Caruth, treasurer, and S. A. Stemmons, secretary.

#### Texas Railroad Figures.

The sixteenth annual report of the Texas Railroad Commission shows that there are 72 railroads in that Commonwealth, only one of which, a minor line, did not file a report. There are 12,575 miles of track, not including sidings and second track, which if added makes a

grand total of 15,482 miles. The report does not cover a number of logging roads and interurban electric railways, nor any railroad under construction. Of the freight hauled, lumber constituted nearly 20 per cent., coal and lignite over 15 per cent., grain nearly 8 per cent., cotton nearly 5½ per cent., crude petroleum over 5 per cent., cottonseed and cottonseed products over 4 per cent.

#### Railroad Notes.

The Atlanta, Birmingham & Atlantic Railway has occupied its new office building at Walton and Fairlie streets, Atlanta, Georgia.

The Queen & Crescent has put in service its new freight depot at Meridian, Miss. It contains offices for the local railroad officials and clerical forces.

The Black Mountain Railroad, which runs from Benington Gap to Imboden, Va., 17 miles, has, it is reported, been entirely completed and is in operation as a coal road from the fields in Lee county.

The Cumberland Railroad has, according to a report from Barboursville, Ky., cut through the tunnel in Brush mountain, three miles from Warren, Ky. The tunnel will be finished as rapidly as possible for use. It is more than half a mile long. The road will be 36 miles long when completed to Jellico, Tenn.

The extension of the Florida East Coast Railway to Knights Key has been opened for business, and about 150 passengers were carried by the first train, which was composed of three day coaches, one parlor car and a baggage car. The train reached Knights Key on time, and through passengers took steamers there immediately for Key West and Havana.

## PHOSPHATES

#### Deal in Phosphate Lands.

According to reports from Bartow, Fla., negotiations have been closed by J. F. Beuty and associates of Boston, Mass., for the purchase of the Pharr phosphate property near Bartow, containing about 1000 acres. The purchasers, it is said, will organize the South Florida Phosphate Co. and erect a modern plant for the development of the deposits. The purchase price is stated at \$150,000.

#### Will Erect Phosphate Plant.

Reports state that the Compagnie Generale des Phosphates de la Floride is making active preparations to develop 2700 acres of phosphate lands which it owns, and will erect a plant at Anthony, Fla. The company has begun the erection of its plant, including dwellings for its employees, spur track, etc., and has received much of its equipment.

Shipments of Peace River phosphate rock made by the Peace River Phosphate Mining Co. through the port of Punta Gorda, Fla., during January amounted to 1750 tons.

#### Southern Forests.

Mr. John H. Finney of Atlanta, Ga., secretary of the Appalachian National Forest Association, has addressed a circular-letter to the members of that body and all others interested in forestry matters congratulating them upon the good shape in which is the measure before Congress for the Southern Appalachian Forest Reserve. He urges that individuals keep in touch by correspondence with Senators and Representatives, and points to work to be done by the association even after the measure shall have become law.

Coal and coke loading in the Kanawha field for January amounted to 308,600 tons of coal and 6120 tons of coke.

## MINING

#### A New Tennessee Development.

The MANUFACTURERS' RECORD is informed that the Swab Coal & Coke Co. has incorporated with a capital stock of \$50,000 and has leased 1500 acres of coal lands for development in Scott county, Tennessee. The property is located on the mountain between Straight Fork and Rock creek on New river, southeast of Oneida, and is said to contain a five-foot vein of coal. It is the purpose of the company to begin active development work in the spring, when a mine will be opened, mining camps established and tipples erected. It will also construct a spur track of railroad to facilitate shipping the product. The company has not yet determined where its main offices will be located, but its officers will include Messrs. D. C. Swab, Hartranft, Tenn., president, and W. A. Owens, La Follette, Tenn., secretary.

#### Lead and Zinc Development.

The development of lead and zinc deposits near Carthage, Mo., has been undertaken by the Weaver Tri-City Mining Co., 707 23d street, Rock Island, Ill., which has recently incorporated with a capital stock of \$75,000 for this purpose. The MANUFACTURERS' RECORD is advised that Messrs. C. G. Valentine and W. C. Krabbenhoft, both identified with the company, have done some drilling on the property, and that a shaft to cost about \$5000 will be sunk next month. After the shaft has been well sunk into the ore it is the intention of the company to erect a mill, but arrangements for this have not been completed. Officers are Messrs. James Carl, president; John J. Glass, vice-president, and James H. Bassett, secretary and treasurer.

#### New Company for Tennessee.

The Baker Coal & Coke Co. has been organized with a capital stock of \$75,000 to develop coal mines on Straight Fork of Smoky creek, in Scott county, Tennessee. The property to be developed is located on the lines of the Cincinnati, New Orleans & Texas Pacific Railway and the Tennessee Railway, Bird M. Robinson, president, which is at present under construction. Officers of the Baker Coal & Coke Co. are Messrs. Joseph M. Baker, Rockwood, Tenn., president; Archie McDonald, vice-president; Samuel P. Parks, secretary and treasurer, and V. D. Sparks, superintendent, all of Harriman, Tenn.

#### Kentucky Coal Mining Co.

The Kentucky Coal Mining Co., Chas. A. Baker, Dayton, Ohio, president, contemplates the establishment of its offices either at Evansville, Ind., or Morganfield, Ky. The company is capitalized at \$2,000,000, and has mines at Waverly, Uniontown and Central City, Ky. It is announced that it will eventually establish a line of steamers and barges to New Orleans, La.

The Lawson Coal & Coke Co. of Williamson, W. Va., has organized to develop about 3000 acres of coal land which it owns near Williamson. It is the intention of the company to install a mining plant having a capacity of 350 tons per day, which will be increased to 500 tons. It is intended to equip the mines with electrical machinery and shaker screens, negotiations for the purchase of which are now in progress, and to construct three miles of railroad. The estimated cost of the plant is \$75,000. Vice-President Harry Lawson of the Bank of Williamson is the president and general manager of the Lawson Coal & Coke Co.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

### The Wymojo Yarn Mills.

The Wymojo Yarn Mills of Rock Hill, S. C., is the correct title of company mentioned last week by the MANUFACTURERS' RECORD as awarding contract for buildings. This company's mill will be one story high, 127½x310 feet, with monitor roof; 17½-foot story at eaves and 20-foot under monitor. Messrs. Keller & Co., the contractors, are beginning construction of the mill and 42 cottages, 2 of five, 30 of four and 10 of three rooms. Their contract is to be completed in June. O. A. Robbins of Charlotte, N. C., is the engineer in charge of construction and equipment. While the mill will have a capacity of 10,000 spindles, it will begin manufacturing with 5000 spindles, the product to be 24s to 30s yarns for the lace-curtain trades and 8s two-ply will be the waste product. Electricity will be the motive power, and will be furnished by the Southern Power Co. of Charlotte, N. C. The Wymojo enterprise was previously announced by the MANUFACTURERS' RECORD, and effected organization with W. W. Moore as president and treasurer; J. B. Johnson, vice-president, and S. G. Wylie, secretary. Capital stock is \$150,000.

### Ball Ground Cotton Mills.

The Ball Ground Cotton Mills of Ball Ground, Ga., has awarded contract to S. L. Clay & Son of Cedartown, Ga., for construction of buildings for the company's proposed plant, which will have 10,000 spindles and 300 looms for manufacturing denims and duck. Organization of the company and other details were reported in the MANUFACTURERS' RECORD of December 19, including mention of the buildings as follows: Main mill, two stories high, 75x320 feet; picker, 32x75 feet; dyehouse, 75x90 feet; engine and boiler rooms, each 40x40 feet. A. J. Lovelady is the company's president.

### A 10,000-Spindle Mill.

It is announced that Smith D. Pickett and associates of Albany, Ga., will organize a company to build a cotton mill of 10,000 spindles. They met last week and determined to complete arrangements promptly. The mill will be driven by electricity. J. E. Sirrine of Greenville, S. C., will be the engineer in charge of planning, building and equipping the plant.

### The Siluria Cotton Mills.

The Siluria Cotton Mills of Siluria, Ala., has been incorporated with a capital stock of \$25,000 and is a continuation of the Siluria Cotton Mill Co., with an equipment of 10,336 spindles and 300 looms. E. J. Smyer is president; W. T. Poe, vice-president, and B. A. Thompson, secretary.

### The Southern Hosiery Mills.

The Southern Hosiery Mills of Cedartown, Ga., has been incorporated with a capital stock of \$20,000 by Messrs. J. W. Ferguson, I. F. Mundy, R. R. Beasley, R. B. Everett, James Heaton and A. H. Graef.

### The Newnan Cotton Mills.

The Newnan Cotton Mills of Newnan, Ga., is renewing its charter of incorpora-

tion and providing for the privilege of increasing capital stock to \$2,500,000 whenever desired. This company was originally incorporated in 1888 with a capital stock of \$500,000, and is now operating 50,000 ring spindles on the production of cotton yarns.

### Wants Knitting Machinery Data.

L. H. Stone and associates of Ozone, Tenn., propose to establish a mill for knitting either hosiery or underwear. They have made no further arrangements, and are desirous of receiving information, prices and other data from makers of knitting machinery.

### Textile Notes.

It is reported that C. M. Deal of Blakely, Ga., is interested in a plan for the organization of a company to build a cotton mill.

Messrs. J. H. Grant, C. F. Colcord, I. H. Putnam and others propose the organization of a company capitalized at \$1,000,000 for the purpose of building a cotton mill at Oklahoma City, Okla.

The Planters' Manufacturing Co. of Oxford, Ala., is reported to have awarded contract for sufficient textile machinery to triple the present capacity of its cotton cordage mill and as contemplating to arrange for further important improvements.

The Alpine Cotton Mills of Morganton, N. C., will build an addition, of brick, 75 feet long, for packing and storing room for mill No. 1. This company is operating about 11,000 spindles on the production of warps, tubes, cones and skeins in 6s and 12s yarns.

## FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

### From a Paris Firm.

Holzmueller & Schmidt, 36 Rue de Sevigne, Paris, France:

"We are always open for agencies of big first-class American manufacturers as sole representatives for France, and we are in a position to provide first-class references in every respect. Our French bankers are Messrs. Marret & Bonnin, 220 Rue Saint Martin, Paris, and in Germany we have our account with the Allgemeiner Deutsche Credit Anstalt Leipzig; also to several United States firms whose interests we have represented here for a number of years to their entire satisfaction. For your guidance we beg to mention that we are in the general provision and drug line, but are also in very close touch with our motor-car manufacturers and allied industries, and, in fact, we shall be prepared to study any tempting proposal which may be made. We have had long experience and established good connections in the trade."

### Want to Represent Manufacturers.

G. L. Bussanich & Co., Piazzadella Borsa 3, Trieste, Austria:

"We wish to represent American manufacturers in Austria. Please send samples and catalogues to above address."

### City Wants Building Plans.

The city of Beaumont, Texas, invites competitive plans and specifications until March 1 for construction of brick or stone market-house, not to exceed \$20,000 in cost. Address J. G. Sutton, city secretary.

Mr. W. W. Ashe of Raleigh has been appointed to take charge of the forestry work in North Carolina under the State Geological Survey.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### January Building Operations.

In a number of Southern and Southwestern cities building operations for January show an increase as compared with preceding months, while in others there has been a decrease both in the number of structures for which permits were issued and the estimated cost to erect. In Austin, Texas, 27 permits were issued during the month, representing a value of \$20,450, an increase as compared with January, 1907, of \$6556. Fourteen permits were issued in Oklahoma City, Okla., having a valuation of \$32,600. During the month 120 permits were issued in Chattanooga, Tenn., having an estimated value of \$63,380, and in Knoxville the cost of operations is estimated at \$75,570. In Memphis 150 permits were issued, including new buildings, additions and repairs, representing a cost to erect of \$102,210. The value of operations in Tampa, Fla., is estimated at \$46,135, which represent 19 dwellings, one clubhouse and a number of miscellaneous structures. A report of the building inspector of Birmingham, Ala., shows that permits were issued for 11 frame structures, two brick, four cement block, one miscellaneous structure and 51 additions and repairs, the total cost being estimated at \$63,178. Building Inspector H. P. Beck of Richmond, Va., reports the total number of permits issued in that city during the month for new structures at 54, with a valuation of \$423,984, and for alterations and repairs at 48, with a valuation of \$29,190. Operations in the District of Columbia show a decrease for the month, the number of permits issued amounting to 238, having a valuation of \$263,183. In Baltimore, Md., the value of operations, including new structures, alterations and repairs, is estimated at \$210,290.

### Timber and Coal Land Deal.

The MANUFACTURERS' RECORD is advised with reference to a purchase of 6000 acres of coal and timber lands in Morgan county, Tennessee, by Messrs. John M. Davis of Wartburg, Tenn., and W. T. Gallaher of Roane county that the property is located on Emory river and within two to five miles of the Cincinnati Southern Railroad. It is said to be underlaid with a good quality of coal known as the Bowling seam, and is heavily timbered with virgin forest, consisting chiefly of poplar, oak and pine, and a good growth of chestnut, beech, sugar tree, ash and hickory. In addition to Messrs. Davis and Gallaher, W. F. Gallaher is also one of the purchasers, who intend to organize a company to develop the coal and timber resources, but definite plans for this have not been determined. The purchase price for the property was \$12 per acre.

### To Make Insulator Pins, Etc.

The Virginia Turning Corporation, C. R. Randolph, general manager, has been organized at Charlottesville, Va., for the purpose of manufacturing locust insulator pins and to do general turning work. It will manufacture squares and blocks of chestnut, oak and poplar for furniture factories, and of persimmon and dogwood for shuttle and bobbin factories. The new company succeeds the United States Locust Pin Co., and has its plant ready for operation in all departments.

### Mill and Timber Lands.

A dispatch from Pine Bluff, Ark., states that Messrs. John F. Rutherford and D. H. Duncan, owners of the Bluff City Lumber Co., have purchased the holdings of

the Grant Lumber Co. at Grant, in Grant county, consisting of a sawmill plant, 12,000 acres of timber lands, four miles of railroad and 3,000,000 feet of lumber. It is said that the deal does not include all the holdings of the Grant Lumber Co.'s stockholders, but carries with it all the interests of that company in the immediate vicinity of the Bluff City Lumber Co.'s branch plant at Clito, in Cleveland county. The purchase price for the properties is stated at about \$200,000.

### Hardwood Manufacturers.

At the annual convention of the Hardwood Manufacturers of the United States, which met at Cincinnati last week, John B. Ransom of Nashville, Tenn., was re-elected president of the association, with other officers as follows: F. F. Lee, Little Rock, Ark., first vice-president; John H. Himmelberger, Moorehouse, Mo., second vice-president, and C. M. Crawford, Cold Cave, Ohio, treasurer.

### Materials for Residence.

Mr. Chas. Vaughn of Unionville, Va., has advised the MANUFACTURERS' RECORD that he wants doors, cabinet mantels, flooring, porcelain bath fixtures, steam-heating plant and other materials for a residence.

### Wants Prices on Lumber.

C. A. Sprinkle of Tobaccoville, N. C., wants prices on lumber; character and quantity not stated.

### Lumber Notes.

A total of 7,100,000 feet of lumber and timber was shipped for export from Moss Point, Miss., last week.

The steamer Francesco Clampa cleared from Mobile, Ala., last week for France via New Orleans, La., with a cargo of 495,080 pieces of staves, the shipment being made by Frank Janes.

The Breckenridge Mercantile Co. of Paragould, Ark., has closed a contract with the St. Louis Southwestern Railway to furnish 20,000 railroad ties for the Paragould Southeastern Railway.

The directors of the Builders' Exchange of Louisville, Ky., have elected the following officers: E. G. Heartick, president; W. C. Magruder, first vice-president; W. B. Pell, second vice-president; Alfred Struck, treasurer; Jennie G. Sater, assistant treasurer, and E. A. Quarles, secretary.

Manufacturing lumbermen of Texas and Louisiana met at Houston, Texas, last week and effected permanent organization of the Texas and Louisiana Sawmill Association by the adoption of a constitution and the election of Messrs. J. W. Link of the Miller-Link Lumber Co., Orange, Texas, president; W. W. Cameron of the Cameron Lumber Co., Waco, Texas, and E. A. Frost of the Frost-Trigg Lumber Co. of Shreveport, La.; J. M. West of the West Lumber Co., Houston; W. T. Whiteman of Saner-Whiteman Company, Caro; Watson Walker of Southern Pine Company, Diboll, Texas; Hugh Corry of Caddo-Rapides Lumber Co., Alexandria, La.; C. E. Slagel of Louisiana Central Lumber Co., Clarks, La.; J. E. Caldwell of Caldwell-Norton Lumber Co., Boleyn, La., vice-presidents; A. W. Miller of the Miller & Vidor Company, Galveston, Texas, treasurer, and Oscar S. Tam, Houston, Texas, secretary.

### Wants Ice and Electric Plants.

The Custer City Commercial Club is endeavoring to interest capital in the establishment of an ice plant and an electric-light plant at Custer City, Okla. Particulars regarding this opportunity will be submitted to inquirers.

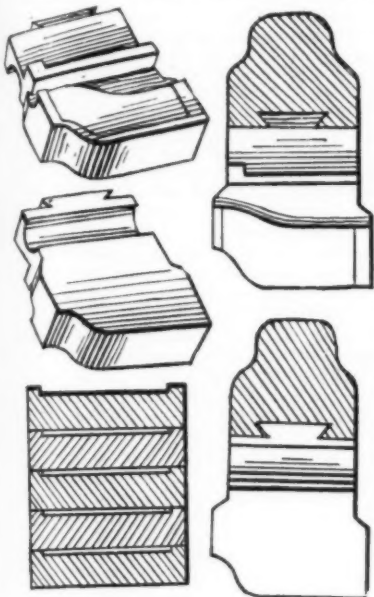


**MECHANICAL****Carr's Patent Car-wheel Chill.**

By R. M. CARR,  
Superintendent Machinery Department Dick-  
son Car Wheel Co., Houston, Texas.

I have been granted a patent on a new and novel idea, a contracting car-wheel chill, for making various sizes of cast-iron car wheels.

For many years it has been known that the wheels made in contracting chills are far superior to those made in plain chills; in fact, many of the largest railroads specify their wheels made in contracting chills. The only contracting chill, and

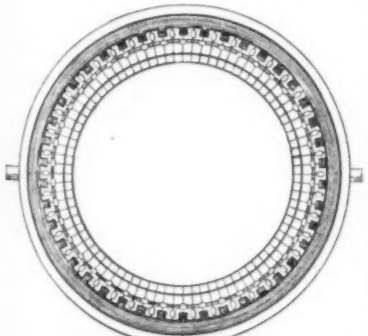


CARR'S PATENT CAR-WHEEL CHILL.

generally used all over the country, is the Carr patent. This has been on the market 20 years, and is still largely in use. It is expensive, and requires much time to manufacture, and many wheel manufacturers and users of wheels have experimented and have searched for something cheaper.

Being a practical machinery man, and having had a great deal of railroad experience and been connected with the railway supply business, I have given this matter much thought, knowing the need of improvements in the car-wheel chills.

My invention consists of the following:  
Of a series of segments, made rights and



CARR'S PATENT CAR-WHEEL CHILL.

lefts, with dovetail ends placed together to form a circle with a small spacing strip on face for the purpose of forming the slots, also for the purpose of relieving the gases from the mold. There is then a ring of metal cast around the dovetail end of the segments which binds them all together. There is no machine work necessary on the face of the segments, thereby retaining the outside surface or skin of the iron which protects it from the hot metal burning in. This slot is only about one-sixty-fourth to one-thirty-second of an inch, which is much smaller than in the other chills, which are sawed, as it re-

quires about three-thirty-seconds for the saws.

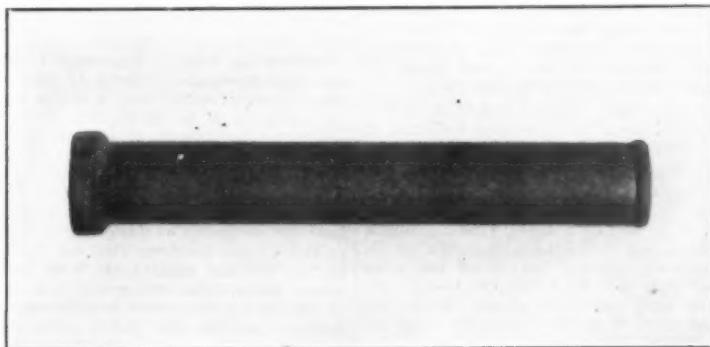
The only machine work necessary to be done on the Carr chill, as described above, is to bore same out to proper diameter of the wheel. This enables you to use the chill the next day after being cast; in other words, does away with sawing and the expense of saws and special machinery for this purpose. It also does away with one day's coremaker's time, which is necessary on other contracting chills. As stated above, the segments are made in my chill very cheaply by the use of molding machines, and are made rights and lefts, thereby doing away with all core work. It is not necessary to do any drilling, as the two segments laid together each form half of the hole for the drag pins or receiving sockets.

This is no experiment. The experimental chills are being used daily making 700-pound wheels. I claim the following saving over any other contracting chill: One day coremaker's time, one dozen saws, 7 to 10 days' labor sawing, saving of \$8 a chill, and 7 to 10 days earlier delivery on each chill. It makes much smoother wheel, as it will not be necessary to grind same, thereby adding to the life of the wheel. Also adds to life of chill. It will always retain its shape and make perfect wheels for three reasons, the loose segments will permit the expansion and contraction to be evenly distributed.

Two accompanying illustrations will show the construction.

**A Compressed-Fiber Bobbin.**

Cotton manufacturers will be interested in the announcement that the Charlotte



PATENT COMPRESSED-FIBER BOBBIN.

Tube Co. of Charlotte, N. C., is now placing on the market Dr. M. A. Bland's patent compressed-fiber bobbin. For the past several years Dr. Bland has been working on his invention, which he believed would be a decided advantage to cotton mills.

The compressed-fiber bobbin (see illustration herewith) is designed for use in place of the wooden bobbin heretofore employed. The fiber bobbin has the advantage of being lighter and less liable to split or warp than the wooden bobbin. It is more uniform in size and wear, and its cost is no more. Owing to the fact that the wood suitable for making the wooden bobbins is growing scarcer and scarcer, the field for the new bobbins is gradually expanding.

For months past the Charlotte Tube Co. has been making these bobbins, and they are now in daily use in several cotton mills.

**Electric Lifting Magnets.**

An innovation of recent years which has proven an important factor in the efficient and economical handling of iron and steel products, loose scrap metal, machinery and other articles is the electric lifting magnet. This device, based on the idea which once served merely as a plaything, is now quite extensively used. For some years the Electric Controller & Supply Co. of Cleveland, Ohio, has made a

specialty of manufacturing electric lifting magnets, and recently issued an illustrated pamphlet presenting some timely and suggestive data regarding the various types of lifting magnets and their uses. Two illustrations herewith are views of the company's magnets handling material. The magnets lift fine turnings, heavy ingots, stock for loading charging boxes for open-hearth furnaces, the charging boxes themselves if required, butts and billets, pig-iron, melting stock, billet crops, steel risers, skull-cracker balls, etc. Referring to the various types of magnets the company says:

"Type S magnet is practically universal in its application. It is a thoroughly practical and money-saving piece of apparatus, and the design was only reached after long study and expensive experimenting.

"After the most efficient design (from a magnetic standpoint) had been reached, the problem was by no means solved. Before it could be put into practical use the magnet had to be made a hardy and dependable tool, capable of withstanding harder usage and more severe operating conditions than any existing type of electrical apparatus.

"To meet these conditions type S magnets are provided with the following structural features: Magnet case is an integral casting of annealed steel; case is provided with external ribs so disposed that they increase the surface for heat radiation, increase the cross-section of the magnetic circuit and add to the stiffness of the structure; lower or active face is concave, which not only increases the effectiveness of the magnet from a magnetic standpoint,

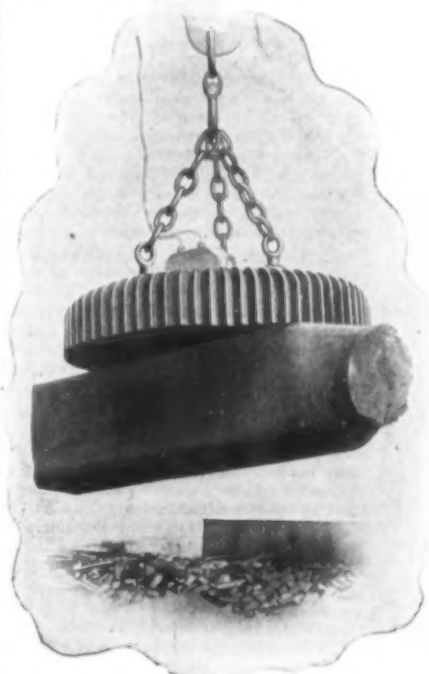
than a consideration of elementary and well-understood laws of the magnetic circuit. This has not been found to be the case, and, in fact, it is probable that there is no other type of electrical apparatus which has so persistently defied the theoretical figures of the designer when reduced to practice. The magnetic circuit of the magnet proper can, of course, be made the subject of more or less exact calculation, but this circuit is normally incomplete, and the resulting magnetization depends upon the character of the



AN ELECTRIC LIFTING MAGNET.

armature; in other words, upon the load to be lifted.

"A magnet which will lift a steel ingot weighing 5000 pounds may not lift a long, thin plate weighing 500 pounds; the armature is not only magnetically, but mechanically different. The thin plate, in addition to its small magnetic cross-section, is very flexible, and the parts of the plate which overhang the poles of the magnet introduce a bending moment tending to tear the plate from the poles. In addition to this, when the plate is lifted it will be



AN ELECTRIC LIFTING MAGNET.

set in vibration by the motion of the hoisting tackle, and this introduces a live load which must be taken care of by the magnet. The air-gap between the poles of the magnet and the load to be lifted (which depends on the smoothness of the surfaces, the presence or absence of scale, dust, snow, ice, etc.) is also an important factor, affecting both the total magnetic flux and its distribution."

Further data regarding these improved lifting magnets can be obtained by addressing the company.

# Construction Department

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

### ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## BRIDGES, CULVERTS, VIADUCTS

Arkadelphia, Ark.—Clark and Nevada counties will construct steel bridge at McIntosh's Bluff on Little Missouri river, connecting the two counties. Structure will consist of two spans, one 175 feet and other 102 feet long. Contract will be awarded February 26; Joe Hardagen, County Judge of Clark county, and A. M. Denman, Prescott, Ark., County Judge of Nevada county.

Barboursville, Ky.—Knox and Whitley counties are considering construction of steel bridge across Cumberland river at Tye's Ferry, connecting the two counties; estimated cost \$15,000. Address Knox County Commissioners.

Beaumont, Texas.—Union Bridge & Construction Co., Kansas City, Mo., general contractors for all bridge work for St. Louis & San Francisco Railway Co. in Texas and Louisiana, has awarded contract to Long-Bell Lumber Co., represented by Alfred K. Woodcock, Lake Charles, La., for 1,500,000 feet of heavy bridge timbers. Contract has also been awarded for about 4000 piling to be used in same work.

Durham, N. C.—Durham county will build six bridges in connection with construction of Roxboro road, one of which will have span of 100 feet, another of 80 feet and four of 16 feet each; estimated to cost \$6300; M. G. Markham, clerk.

Lynchburg, Va.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., is reported as contemplating construction of three steel bridges at Lynchburg.

Pine Bluff, Ark.—City will construct concrete culvert across ravine on East Second avenue. Contract will be awarded February 17; W. A. Lee, Clerk; W. L. Toney, chairman Board of Public Works. (See "Machinery Wanted.")

## CLAYWORKING PLANTS

Ardmore, Okla.—N. W. Dunham, Dallas, Texas, is principal of company which will establish sand-lime brick plant at Ardmore. (Recently mentioned.)

Esterwood, La.—W. F. Leach, Shively, Ky., R. F. D. No. 4, Box 39, is organizing

company to establish brick and tile works.

Fort Smith, Ark.—Burke Brick Co. incorporated with \$150,000 capital stock to continue brick plant of Burke Bros.; M. C. Burke, president; Frank A. Handlin, vice-president; John H. Vaughn, secretary, and Mrs. Nellie Quinn, treasurer.

Lexington, Ky.—Lexington Brick Co. has increased capital stock from \$40,000 to \$75,000 and will increase capacity of plant.

Macon, Ga.—Anderson Brick Co. incorporated with \$6000 capital stock and privilege of increasing to \$50,000 to manufacture artificial and building brick, tiling, cornice, etc., by John R. Anderson, Mrs. Elizabeth G. Anderson and W. T. Anderson.

## COAL MINES AND COKE OVENS

Barboursville, Ky.—Lynn Camp Coal Co., which is now developing 699 acres of coal land, will install new machinery and increase capacity of mines.

Barboursville, Ky.—Interstate Coal Co. is understood to have completed plans for final organization with a capital stock of \$3,000,000 and the extensive development of various coal properties. It is said to have taken over the holdings and mining plants of the Brush Creek Coal Co. at Warren, the Evans-Jellico Coal Co. at Tinsley, the Matthews Coal Co. at Warren and others, besides large areas of coal lands which have not been mined. Improvements are contemplated for the different operating plants, also the opening of new mines in various sections. Company is understood to be under direction of George L. Carter, president of South & Western Railway; offices at Johnson City, Tenn. The company is not prepared to announce its plans at present.

Central City, Ky.—Kentucky Coal Mining Co., Charles A. Baker, president, Dayton, Ohio, will sink several new shafts at coal mines at Central City.

Dallas, Texas.—Jupiter Coal & Mining Co. incorporated with \$50,000 capital stock by Owen Hughes, K. Shields and Lewis F. Jones; branch office at Blocker, Okla.

Gause, Texas.—Reported that W. S. Reeves, Houston, Texas, has purchased 1500 acres of coal land near Gause for development.

Hartman, Tenn.—Swab Coal & Coke Co. incorporated with \$50,000 capital stock; president, D. C. Swab of Hartman; secretary, W. A. Owens, La Follette, Tenn.; postoffice location and main office address not yet determined; company has leased 1500 acres coal lands in Scott county, Tennessee; will open mine and build tipples, camps and spur track in spring. (Recently noted under "Jacksboro, Tenn.")

Johnson City, Tenn.—Reported that Metta Coal Co. has been organized, with E. F. Young, president.

Scott County, Tenn.—Baker Coal & Coke Co., recently reported incorporated, has elected Joseph N. Baker, president and general manager, Rockwood, Tenn.; Archie McDonald, vice-president; S. P. Sparks, secretary-treasurer, and V. D. Sparks, superintendent, all of Harriman, Tenn.; capital stock \$75,000. Active development at coal mines in Scott county will soon begin.

Scottsboro, Ala.—Dr. R. V. Pierce, Buffalo, N. Y., and Dr. F. D. Pierce, probably of Scottsboro, are reported as preparing to develop the 16,000 acres of coal, timber and mineral lands in Jackson county, reported purchased in December. Lands to be connected with Southern Railway by 14 miles of railroad, and with Tennessee river by railroad.

Warburg, Tenn.—W. T. Gallaher, W. F. Gallaher and J. M. Davis contemplate organizing company to develop coal and manufacture timber on 6000 acres of land recently noted purchased in Morgan county; no definite plans made.

Williamson, W. Va.—Lawson Coal & Coke Co. organized with Harry Lawson as president and general manager; will develop 3000 acres coal lands; mines to be equipped with electrical machinery and shaker screens; company is negotiating for machinery; will build three miles of railway; cost of plant \$75,000; daily capacity 350 tons to be increased to 500 tons; offices in Bank of Williamson.

## CONCRETE AND CEMENT PLANTS

Weston, W. Va.—Weston Concrete Co. incorporated with \$10,000 capital stock by R. L. Vland, Charles Lively, W. H. Warren, C. W. Linehart and others.

## COTTON COMPRESSES AND GINS

Anderson, S. C.—Farmers' Union of Anderson county will establish cotton compress to cost about \$3500.

Franklin, Va.—Franklin Cotton, Oil & Fertilizer Co., J. M. Story, president, recently noted incorporated (under "Miscellaneous Manufacturing Plants"), will erect two buildings, one 30x50 feet, one story, and one 20x60 feet; two stories; will equip with Munger system two 70-saw outfits; ginning machinery purchased. (See "Miscellaneous Manufacturing Plants.")

Tulla, Texas.—Tulla Commercial Club, W. A. Donaldson, president, is endeavoring to secure establishment of cotton gin.

## ELECTRIC-LIGHT AND POWER PLANTS

Afton, Okla.—City will vote on issuance of bonds to build electric-light plant. Address The Mayor.

Ashland, Va.—Virginia Light & Power Co. will construct electric-lighting system, and has contracted to furnish 300 lights in business section.

Bastrop, Texas.—Robert Bayne, Fort Worth, Texas, has purchased light and water plant at Bastrop.

Centerville, Ala.—Centerville Power Co. contemplates constructing dam across the Cahaba river.

Christiansburg, Va.—Montgomery Electrical Co. incorporated; will absorb and operate Grayson Electric Corporation and municipal lighting system of Christiansburg and Cambria; general offices, Phlegar Building, Christiansburg; president, J. L. Vaughn; vice-president, E. S. Hagan; secretary-treasurer, A. A. Phlegar, Jr. (Grayson Electric Corporation and lighting system of Christiansburg and Cambria recently noted purchased by Vaughn Construction Co. of Roanoke, Va.)

Chattanooga, Tenn.—Chattanooga-Tennessee River Power Co. reported to have arranged contract with Wilson & Baillie Manufacturing Co., 85 9th street, New York, for continuing to completion construction of plant at Hales Bar, 12 miles below Chattanooga. Legal complications recently interfered with completion of previous contract. This plant will ensure permanent improvement for navigation on Tennessee river and provide a water-power-electrical development for an ultimate capacity of 56,000 horsepower. Power-house will have 14 units, each of 4000 horse-power, and 10 will be installed before end of 1909; dam 1200 feet long, 50 to 60 feet high above rock bottom of river; masonry and concrete construction. Power-house will be 60x320 feet. Electricity will be transformed to 60,000 volts, then transmitted to substation near Chattanooga and there changed to voltage suitable for distribution for lighting and manufacturing. Company will construct double transmission line, each to have three copper cables supported on steel towers; about 500-foot span between each. Construction will include 300-foot lock, 60 feet wide. All plans prepared by U. S. Army Engineers and engineers of company and approved by chief of engineers of army. John Bogart, 16 Exchange Place, New York, engineer for company. (This enterprise previously detailed by Manufacturers' Record.)

Clarendon, Texas.—Clarendon Water, Light & Power Co. will expend about \$10,000 in improvements to plant; T. S. Kemp, local manager.

Custer City, Okla.—Custer City Commercial Club is endeavoring to secure construction of electric-lighting plant.

Fort Worth, Texas.—City will improve electric-light plant so as to furnish about 900 additional arc lights. About \$50,000 worth of new machinery will be installed; Sam Davidson, City Commissioner.

Guntersville, Ala.—V. V. Moore and others are interested in organization of company to establish electric-light plant.

Hope, Ark.—City will erect power-house recently referred to; brick; about 65x70 feet; will install engine and dynamo to increase capacity of water and light plant; architect, J. A. Omburg, Jr., Memphis, Tenn.; B. F. Jackson, engineer; Charles M. Richards, superintendent.

Huntsville, Ala.—City is considering issuance of \$30,000 of bonds for municipal ownership of electric-light plant. Address The Mayor.

Leslie, Ark.—Williams Cooperage Co. is extending electric-light system at its plant.

Louisville, Ky.—Kentucky Electric Co. reported as to erect two-story addition to plant at a cost of \$25,000; Robert E. Hughes, president.

Marble Falls, Texas.—Granite Manufacturing Co. incorporated with initial capital stock of \$300,000 to build water-power electrical plant for development and transmission of 12,000 horse-power. It has engaged John W. Maxcy of Houston, Texas, as engineer in charge, and he will furnish plans and specifications for construction of dam about 1100 feet long; construction work will be of reinforced concrete, and will fill crevices in present natural dam, adding 10 feet to the elevation; masonry will vary from 10 to 18 feet in height. G. W. Voires of Marble Falls is manager of Granite Manufacturing Co. (Previous report was inaccurate.)

McAlester, Okla.—William Busby has purchased controlling interest in the McAlester electric-lighting system, which he will probably consolidate with the Choctaw Inter-urban line.

Milledgeville, Ga.—Oconee Milling Co. is reported as planning the development of water-power on the Oconee river; about 800 horse-power.

Minden, La.—J. H. Ransom, Hereford, Texas, is interested in erection of electric-power plant in San Angelo.

Norton, Va.—City will vote on issuance of \$20,000 electric-light bonds. Address The Mayor.

Sharpsburg, Md.—John C. Livers, Shepherdstown, W. Va., has secured franchise to furnish Sharpsburg with 55 arc lights for lighting streets; current will be furnished by power plant along Potomac river at Shepherdstown. (Mentioned in January.)

St. James, Mo.—Chris Koeln, St. Louis, Mo., has submitted proposition for operation of electric-light plant in St. James, and an election will be held February 25 to vote on acceptance.

Waynesboro, Miss.—City has voted \$12,000 of bonds to build electric-light plant. Address The Mayor.

## FOUNDRY AND MACHINE PLANTS

Anniston, Ala.—Anniston Foundry & Machine Co. has resumed operation of plant, which had been closed to permit repairs and installation of new machinery. Company's daily production is 7 to 10 tons solipile and fittings and gray iron castings.

Ardmore, Okla.—Lightning Rods, etc.—Reported that Willy Small will establish plant for manufacturing lightning rods and anchor stays.

Baltimore, Md.—Brass Works.—J. Regester's Sons Company, Holliday and Saratoga streets, will rebuild building recently reported burned.

Baltimore, Md.—Crook-Kries Company, 227-231 West Saratoga street, has taken over the entire mechanical and contract department of Crook-Horner Company. New company will make specialty of steam and hot-water heating and ventilating and electrical apparatus; high and low-pressure pipe work; installation of boilers, engines, pumps and every other kind of mechanical machinery and all kinds of machine work, both repairing and manufacturing.

Bessemer, Ala.—Stoves and Ranges.—Reported that George H. Stevenson is interested in establishment of stove and range foundry.

Dallas, Texas.—Dallas Machinery Depot incorporated with \$20,000 capital stock by W. A. Kreuger, Walter Connally, George R. Dilley and E. P. Gillman.

Fort Smith, Ark.—Drilling Supplies.—Fort Smith Well-Drill Manufacturing Co. incorporated with \$25,000 capital stock to manufacture well drills and tools; S. L. Johnson, president; F. E. Gilmore, secretary-treasurer. (See "Machinery Wanted.")

Greenville, S. C.—Automobile Repair Shop. Barr Hardware Co. will erect addition to shops; to be used for sale and repair of automobiles; two-story; steel and brick; 60x60 feet.

Memphis, Tenn.—Railway Supplies.—Comley Frog & Switch Co., J. E. Conley, president, will erect one-story building, to cost about \$30,000.

Memphis, Tenn.—New Process Casting & Metal Co. incorporated with \$50,000 capital stock by H. G. Undersood, H. B. White, W.



S. Brian, D. S. Rice and others to establish foundry and machine shop.

Norfolk, Va.—Stoves.—Stanford Steel Range Co. incorporated with \$100,000 capital stock to manufacture stoves and ranges; George T. Tilley, president; C. T. Robinson, vice-president, and J. P. Jackson, secretary; will erect one-story frame building 70x120 feet; cost of building \$5000; cost of machinery \$15,000; present daily capacity, 10 stoves; can be quadrupled; equipment completed; addresses, Norfolk, Va., and South Norfolk, Va. (Stanford Steel Range Co., W. K. R. Stanford, president, Sheffield, Ala., reported in December to establish plant in Norfolk.)

Oklahoma City, Okla.—Implement Manufacturing.—Oklahoma Implement & Manufacturing Co. incorporated with \$150,000 capital stock by D. W. Lackey, J. A. Stibbons, A. B. Snodgrass and W. Z. Hurd.

Petersburg, Va.—Peanut Harvester.—American Peanut Harvester Co. incorporated with \$50,000 capital stock to purchase patent for making machinery for harvesting peanuts; Hugh R. Percivall of Petersburg, president; H. B. Williams, vice-president and secretary, and G. W. Williams, treasurer, both of Newville, Va.

Springfield, Mo.—Phoenix Foundry & Machine Co. will enlarge plant by erection of foundry 50x57 feet.

St. Louis, Mo.—Gas and Electric Fixtures.—Gross Gas & Electric Fixture Co. incorporated with \$13,500 capital stock to manufacture gas and electrical fixtures by E. L. Gross, Fred Carr, H. A. Krueger and others.

## ICE AND COLD-STORAGE PLANTS

Bastrop, Texas.—William Bayne, Fort Worth, Texas, is reported to install 20-ton ice factory in connection with water and light plant recently purchased.

Custer City, Okla.—Custer City Commercial Club is endeavoring to secure construction of ice plant.

Charles Town, W. Va.—Charlestown Ice Plant will be established; managing officers, C. L. Robinson and W. R. Hillyard; capital \$25,000; will install 20-ton ice-making machine; cold-storage plant for apples to be built later; architect, the Frick Company of Waynesboro, Pa. (C. L. Robinson recently noted to remodel purchased plant.) (See "Machinery Wanted.")

Conway, Ark.—Board of Trade is contemplating establishment of 10-ton ice plant; estimates are wanted on buildings and machinery complete; W. N. Owen, secretary. (See "Machinery Wanted.")

Dickson, Tenn.—G. W. Schueing, Nashville, Tenn., is promoting organization of company with \$15,000 capital stock to establish ice factory at Dickson.

Greenville, Ky.—Reported that the Greenville Water & Light Co. or the Greenville Milling Co. will install ice plant.

Hot Springs, Ark.—Gibson & Draughon Commission & Cold Storage Co. incorporated with \$25,000 capital stock by W. M. Draughon, S. H. and F. L. Stitt and others.

Louisville, Ky.—Independent Ice & Coal Co., recently reported incorporated with \$25,000 capital stock by Emil Peter and others, will erect ice factory 60x160 feet; cost about \$15,000.

Terrell, Texas.—Terrell Ice Co. incorporated with \$60,000 capital stock by P. G. Whaley, E. Key and W. L. Martin.

## IRON AND STEEL PLANTS

Fort Smith, Ark.—Rolling Mill.—Reported that Ardmore Foundry, Machine & Boiler Co., Ardmore, Okla., will establish rolling mill in Fort Smith, investing about \$200,000.

Gadsden, Ala.—Iron Furnaces and Mines, Steel Plant, etc.—It is announced that W. H. Hassinger and John E. Morris of Birmingham, Ala. and T. Stonewall Kyle of Gadsden have been elected as trustees by the creditors of the Southern Steel Co., and that J. W. McQueen, W. M. Drennen and George Shirley of Birmingham have been appointed appraisers by the court. Reports state that the trustees' administration will be brief, as a committee of capitalists largely interested in the company has been appointed to plan an early reorganization and agreed to furnish several million dollars of additional capital for operating the various plants and making whatever betterments are advisable in order to have all the properties in the best possible physical condition, and that all the present holdings of the company will be retained. The Southern plants include iron furnaces, blooming mill, rod mill, wire-mill mill, coal and iron mines, etc., in Alabama, Georgia and Tennessee. Moses Taylor of Kean, Van Cortlandt & Co., 30 Pine street, New York, is the company's president.

Jenifer, Ala.—Iron Furnace.—Jenifer Iron & Coal Co. has begun repairs to furnace; will include installation of new boilers, repairing of old ones and relining of furnace; W. H. Weller, Anniston, Ala., is president. (Company mentioned in November as arranging to blow in iron furnace with annual output of 50,000 tons, and coke ovens with annual output of 50,000 tons, and to develop iron mines.)

Missouri.—Missouri Iron & Steel Co. incorporated with \$2,000,000 capital stock by Harland B. Tibbets, 116 West 79th street; A. F. Fitzgerald, 1173 Lexington avenue, and James G. Gregg, 114 West 79th street, all of New York city.

Oklahoma City, Okla.—Rolling Mill.—L. Bernstein, Oklahoma Iron Metal & Wreckage Co. is planning organization of stock company to establish rolling mill.

St. Louis, Mo.—Blast Furnace.—St. Louis Blast Furnace Co. has blown out its furnace at South St. Louis for relining.

## LUMBER-MANUFACTURING PLANTS

Cadiz, Ky.—Charles Wilson, Charles Dungan and Linn Williams, Golden Pond, Ky., have purchased 7000 acres of timber land in Trigg county and will develop the property for the manufacture of railroad ties.

Canton, Miss.—Dickson-McLaurin Lumber Co. incorporated with \$10,000 capital stock.

Clayton, Texas.—Howard-Mixon Lumber Co. (T. T. Howard, Newton, Texas, and C. A. Mixson, Kirbyville, Texas) is perfecting arrangements for operation of sawmill at Clayton; daily capacity, 40,000 feet; cost, \$12,000; 10,000,000 feet of timber available; planing mill to be installed later.

Colorado, Texas.—Davis Lumber Co. incorporated with \$10,000 capital stock by J. H. Finning, J. T. Murphy, J. B. Green and others.

Cumberland County, Tenn.—Clear Creek Coal & Lumber Co. organized by Southern Development Co., Columbus, Ohio, to develop 5600 acres of coal and timber land in Cumberland county which W. V. Smith and D. L. Jones have been planning to develop.

Eureka Springs, Ark.—Granger-Kelley Lumber Co. has purchased timber property of Baker Lumber Co. and will undertake development.

Glamorgan, Va.—Currier Lumber Co. incorporated with \$225,000 capital stock; W. M. Currier of Glamorgan, president; R. H. Lewis, secretary, and W. I. Lewis, treasurer, both of Coudersport, Pa.

Huntington, W. Va.—Biggs-Wilson Co. incorporated with \$10,000 capital stock by G. N. Biggs, Joe L. Wilson, S. M. Trimmer and others.

Keithville, La.—Keithville Lumber Co. incorporated with \$25,000 capital stock; H. H. Bain, president.

Langford, Miss.—A. T. Miller has equipped sawmill with new machinery and expects soon to erect planing mill.

Louisville, Ky.—Roth Lumber Co. incorporated with \$30,000 capital stock by Louis B. Kisel, Thomas R. Brown and Albert S. Weinberg.

Lynchburg, Va.—Massie & Pierce, B. W. Massie, president, recently reported incorporated, will continue lumber-manufacturing plant of Massie & Pierce; no new plants to be installed at present.

Marianna, Ark.—Langille Sawmill Co. will rebuild and enlarge sawmill destroyed by fire; Ben Miller, Sr., Kansas City, Mo., manager.

Memphis, Tenn.—W. A. Stark Lumber Co. incorporated with \$25,000 capital stock by W. A. Stark, C. H. Crisman, William L. Crenshaw and others.

Mobile, Ala.—Barclay Lumber Co. incorporated with \$10,000 capital stock; Hugh G. Barclay, Jr., president; St. John Wilson, vice-president, and Walter L. Sink, secretary-treasurer.

Mobile, Ala.—Barclay Lumber Co. incorporated with \$10,000 capital stock by H. G. Barclay, Jr., W. L. Sink and St. J. Wilson.

New Decatur, Ala.—Robert Watson will install sawmill. (See "Miscellaneous Manufacturing.")

Orange, Texas.—Key Lumber Co. contemplates improvements to plant, increasing daily capacity; J. D. Key in charge of main office at Orange and T. W. Key in charge of mill. (Company mentioned in December as having purchased sawmill and timber land at Pruitt's Bluff and to install planing mill and drykiln.)

Pembroke, N. C.—Pembroke Planing Mill Co. has increased capital stock from \$10,000 to \$50,000; R. W. Massie, president.

Pine Bluff, Ark.—John F. Rutherford and D. H. Duncan, who have secured control of Bluff City Lumber Co.'s properties at about \$1,000,000, have purchased plant of Grant Lumber Co., 12,000 acres of timber land, four miles of railroad and 3,000,000 feet of lumber at Grant; reported consideration, \$200,000.

White Bluffs, Tenn.—Albert Slayter will build planing and grist mill equipped with gasoline engine.

Wilmington, N. C.—Cape Fear Lumber Co., J. A. Arringdale, vice-president and general manager, will rebuild mill burned at a loss of \$100,000.

Shreveport, La.—Bonds Lumber Co. incorporated with \$25,000 capital stock; Jake Davis, president.

Springfield, Mo.—Landers & Davis Manufacturing Co. incorporated with \$50,000 capital stock by John Landers, D. J. Landers and A. H. Davis. Company has awarded contract for erection of two-story brick planing mill 61x184 feet. (Mentioned in December.)

Tampa, Fla.—Dowling Lumber & Export Co. incorporated with \$25,000 capital stock by C. H. Tedder of Tampa, Thomas Dowling, C. H. Lutz and C. H. Brown, all of St. Petersburg, Fla.

Walnut Lake, Ark.—Walnut Lake Cypress Co. is proceeding with construction of plant for manufacturing cypress lumber, and expects to have its band and lath mill completed by March 15. Mill designed by Clark Bros. Co., Belmont, N. Y., which also furnishes machinery; concrete foundations, heavy cypress timber frame; daily output, 50,000 feet of lumber and 20,000 laths, and cost approximately \$50,000. Company is also excavating canal 8 miles long, 14 feet wide and 6 feet deep for carrying logs to mill and for drainage; E. P. Ladd, Little Rock, Ark., president; C. S. Bacon, Pine Bluff, Ark., vice-president; W. B. Craft, secretary-treasurer, and R. E. Schultz, mill superintendent, both of Walnut Lake. (Full details mentioned in November.)

Wartburg, Tenn.—W. T. Gallaher, W. F. Gallaher and J. M. Davis are purchasers of 6000 acres of timber and coal lands in Morgan county recently mentioned; contemplate organization of company to manufacture the timber; no definite plans made for development.

## MINING

Anthony, Fla.—Phosphate.—Compagnie Generale des Phosphates de la Floride, owning about 2700 acres of phosphate lands, is preparing to establish phosphate plant. Company has erected dwellings for employees, is now constructing spur track, and machinery, including steam shovel, cars, locomotives, etc., will soon be received.

Arrington, Va.—Soapstone Quarries.—American Soapstone Corporation is understood to have completed all arrangements for installation of machinery for development of its soapstone properties. This company incorporated with capital stock of \$100,000 and has main offices at 3108 Third avenue, New York. Judson G. Gulladay of Arrington is agent.

Bartow, Fla.—Phosphate.—J. F. Beaty, Boston, Mass., and associates have purchased about 1000 acres of phosphate lands at Bartow at \$150,000, and will organize the South Florida Phosphate Co. to erect plant and undertake developments.

Carthage, Mo.—Lead and Zinc.—Weaver Tri-City Mining Co., recently reported incorporated, will develop lead and zinc deposits near Carthage; president, James Carl; vice-president, John J. Glass; secretary-treasurer, James H. Bassett; C. G. Valentine, superintendent of drilling; mill to be erected later; plans for mill not made; shaft to be sunk next month; cost of shaft and equipment, \$5000; principal address, 707 23d street, Rock Island, Ill.

Fredericktown, Mo.—Lead, etc.—North American Lead Co. will install \$250,000 smelter, to be operated by electricity and used in production of lead, cobalt, nickel and copper.

Joplin, Mo.—Barnard Mining Co. recently reported incorporated with \$48,000 capital stock, has elected D. M. Sayers, president; E. O. Bartlett, vice-president, both of Joplin; J. H. Barnard, Chicago, Ill., secretary, and Charles M. Sayers of Joplin, treasurer. Company holds first lease on 10 lots on Granby Mining & Smelting Co.'s land in Leadville Hollow, and controls the Lounetta property, and plans to erect 150-ton concentrating plant on each tract.

Joplin, Mo.—Endeavor Mining & Investment Co. incorporated with \$50,000 capital stock by W. D. and L. L. Coldren, H. A. Haswell and others.

Oklahoma City, Okla.—Gold.—Pilot Hill Gold Mining Co. incorporated with \$100,000 capital stock by E. L. and J. L. McKeown,

both of Guthrie, Okla.; W. G. Morris and J. W. Pyne, both of Alameda, Cal., and others.

Russellville, Ala.—Eureka Mining & Development Co. incorporated with \$50,000 capital stock by P. J. Hammer, J. B. O'Gava, J. F. Gallagher and others.

Sherwood, W. Va.—Iron Ore.—Reported that Sherwood Iron Ore Co. has sold property in Greenbrier and Pocahontas counties to Northern syndicate, which will undertake development.

Starkey (not a postoffice), Va.—Reported that D. William Good, probably of Roanoke, Va., is organizing company to develop gold mines in Roanoke county.

Womble, Ark.—Gold.—Reported that James J. Thompson and Henry Blair are to develop gold deposits.

## MISCELLANEOUS CONSTRUCTION WORK

Hattiesburg, Miss.—Heating Supply.—City Council is considering a plan to utilize waste steam from municipal water-works for heating business buildings and residences. Address The City Engineer.

Jennings, La.—Irrigation.—Riverside Irrigation Co., Ltd., D. C. Ritchie, manager, has contracted with A. T. Lee for extension of its canal on the relief, 3½ miles into North Maumou prairie, where 2000 acres of undeveloped rice lands can be irrigated. When work is completed company will have about 8000 acres of rice lands accessible.

Lake Charles, La.—Dredging.—Houston River Canal Co. will dredge about 15 miles of Bayou Choupique.

Louisia, Ky.—Dam.—Major Warren, engineer in charge, has recommended acceptance of bid of \$62,000 from J. C. Thomas for work on Louisa dam.

Savannah, Ga.—Dredging.—Simons-Moyart Company, Charleston, S. C., has contract at \$7472.70 for dredging of shoals which have formed at mouth of Mud river, Ramshorn creek and Pine Island creek in inside route from Savannah to Beaufort, S. C.; amount, 22,490 cubic yards.

St. Augustine, Fla.—Canal.—Florida Coast Line Canal & Transportation Co. is preparing details preliminary to beginning final construction work on East Coast canal—that of completing cuts between waterways from St. Augustine to Jacksonville, Fla. Route has been definitely selected, final surveys made, and actual excavating work will soon commence. Company has also constructed drydock 90x80 feet, connected with main canal by lock canal, to be used for repairing dredge-boats.

## MISCELLANEOUS ENTERPRISES

Abbeville, La.—Gas, Oil, etc.—Isle Maron Oil & Mineral Co., Ltd., incorporated with \$300,000 capital stock to develop oil, gas and other mineral lands; president, J. E. Nettles; vice-president, M. R. Cushman; secretary-treasurer, A. J. Godard.

Abbeville, S. C.—Printing Plant.—Commercial Printing Co. is name of company recently noted to establish printing plant; proprietors, C. H. and G. P. Cannon, will print law briefs, pamphlets, commercial jobs, etc.

Alden, Okla.—Telephone System.—Alden Telephone Co. incorporated with \$10,000 capital stock by H. S. Sturges and S. W. Carpenter, both of Alden; Fred Brasted, Oklahoma City, Okla., and others.

Baltimore, Md.—Electric and Elevator-repair Plant.—Standard Electric & Elevator Co., 211 South Charles street, has taken over the electrical and elevator departments of the Crook-Horner Company. The new company will do all kinds of repairs, construction and inspection on electric, hydraulic and hand elevators, also armature winding and motor and wiring installations.

Bay City, Texas.—Land Improvement.—Burton D. Hurd Land Co. incorporated by F. H. Jones, C. M. Magill and K. W. Magill.

Beaumont, Texas.—Oil Wells.—Aetna Oil Co. incorporated with \$3000 capital stock by Leon R. Levy, Guy W. Junker and W. L. Browning.

Birmingham, Ala.—Hardware.—Spiro Hardware Co. incorporated with \$50,000 capital stock; Simon Spiro, president; Jonas Spiro, vice-president and manager; J. W. Beasley, secretary-treasurer, and W. R. Foreman, superintendent.

Charleston, W. Va.—Machinery and Supplies.—Daffron & Ellyson Co., incorporated with \$5000 capital stock by W. H. Daffron, C. H. Ellyson, Henry Ford, Jr., and others.

Charleston, W. Va.—Amusement Company.—Majestic Amusement Co. incorporated with \$5000 capital stock by W. C. Barger, J. D. Campbell, W. F. Comstock and others.

Charlotte, N. C.—Laundry.—Charlotte Steam Laundry, 219 South Tryon street, F. D. Lethco, manager, will not at present erect building on site recently reported purchased.

Clover, S. C.—Telephone System.—Reported that Piedmont Telephone Co., Yorkville, S. C., will construct telephone system extending about nine miles along the Clover and Bethel road, and build telephone exchange at Clover.

Columbus, Ga.—Grain Elevator.—Ben T. Brooks Co., Ben T. Brooks, president, will install grain elevator.

Cookeville, Tenn.—Publishing.—Mountaineer Publishing Co. Incorporated with \$3000 capital stock to take over and enlarge printing plant purchased from Quimby Dyer; incorporators, T. G. Settle, S. A. Draper, D. H. Morgan, Quimby Dyer and others.

Corsicana, Texas.—Telephone System.—Southwestern Telephone & Telegraph Co., Dallas, Texas, has secured 20-year franchise to construct and operate system of underground telephone wires in Corsicana.

Cumberland, Md.—Jewelry.—Walter Powell & Sons Jewelry Co. Incorporated with \$50,000 capital stock by Walter Powell, F. Edgerton Powell, A. C. Kintner and others.

Cyril, Okla.—Telephone System.—Cyril Southwestern Telephone Co., reported incorporated in January, will construct telephone system; O. D. Childs, engineer; managers, A. A. Hatt, J. W. Thompson and O. D. Childs.

El Reno, Okla.—Oil and Gas Wells.—Canadian Oil & Gas Co. Incorporated with \$1,000,000 capital stock by Pay Ragland, Joe B. Shore, W. G. Williams and L. B. Pennell.

Enid, Okla.—Orchard Company.—Andrew County Orchard Co. Incorporated with \$20,000 capital stock by E. L. Bronston of Enid, G. G. Hoffman and Harve Glan, both of Trenton, Mo.

Fort Smith, Ark.—Shoes.—Morris Shoe Co. Incorporated with \$25,000 capital stock by S. M. Morris, John W. Olvey and Katherine Morris.

Fulton, Ky.—Grain Elevator.—Browder Bros. will erect grain elevator. (See "Miscellaneous Manufacturing.")

Gadsden, Ala.—Steam Laundry.—Gadsden Steam Laundry Incorporated with \$20,000 capital stock; has leased and will operate steam laundry; Fred Lucy, president, and W. E. Lucy, secretary-treasurer.

Gaffney, S. C.—Land Improvement.—Oak Ridge Land Co. Incorporated with \$12,000 capital stock by D. C. Ross and Boyd L. Hames.

Glen Rose, Texas.—Developing Company.—Glen Rose Developing Co. Incorporated by W. D. Morton, T. J. and R. L. Bryan, J. B. Farnell and G. C. David.

Herdon, Va.—Land Improvement.—District Realty Co. Incorporated with \$100,000 capital stock; A. W. Hart, president; J. T. Sherler, secretary, and D. K. Jackson, treasurer.

Huntington, W. Va.—Land Improvement.—Suburban Land Co. Incorporated with \$300,000 capital stock by B. P. Wilson, J. W. Dingess, S. H. Bowman and others.

Jennings, La.—Oil Wells.—Great Southern Petroleum Co., principal address Room 617 Hibernia Bank Building, care of S. B. McConico, president, New Orleans, La., was recently noted to develop oil wells; plans not fully determined; architect and engineer not engaged; manager, Jas. J. Lewis, Eunice, La.

Kansas City, Mo.—Orchard.—Carroll Orchard Co., Incorporated with \$80,000 capital stock by J. J. Kernekel, M. V. Davis, J. A. Frick and others.

Kansas City, Mo.—Publishing.—Old Settlers' Publishing Co. Incorporated with \$5000 capital stock by Roland Hughes, A. C. Warner, W. P. Borland and others.

Kansas City, Mo.—Crushed Stone, etc.—Crushed Stone & Filler Co., Scarritt Building, recently reported incorporated, will establish stone-crushing and filler plant at cost of \$75,000 for buildings, machinery, etc.; will construct 2000-cubic-yard crushing plant and 1500-ton filler plant; will produce crushed stone for railroad ballast and concrete work, glasshouse sand, asphalt filler, fertilizer and other rock products; president, William Mansfield; vice-president and general manager, Clifford W. Lyon; treasurer, Albert M. Peck; secretary, Dennet E. Babblitt.

Kansas City, Mo.—Cleaning Company.—Gentry-Forsythe Cleaning Co. Incorporated by M. K. Gentry, Charles Forsythe and J. W. Forsythe.

Kansas City, Mo.—Construction.—A. M. Blodgett Construction Co. Incorporated with \$100,000 capital stock by A. M. Blodgett, John Springer and others.

Lathrop, Mo.—Hardware.—Armstrong-Elwood Hardware Co. Incorporated with \$25,000 capital stock by John Armstrong, Henry Elwood and H. L. Gilchrist.

Little Rock, Ark.—Printing Plant.—Weldon, Williams & Lick contemplate erection of two-story brick building at a cost of \$12,000 in which to install printing plant.

Louisa, Va.—Telephone System.—Citizens' Mutual Telephone Co. Incorporated with \$5000 capital stock; B. C. Goodwin, president, Buckner, Va.; J. H. Parrish, vice-president, Bumpass, Va., and C. B. Meredith, secretary-treasurer, Willowbrook, Va.

Macon, Ga.—Farming Implements.—Macon Implement Co. Incorporated with \$6000 capital stock, and privilege of increasing to \$50,000, by W. E. Cookerly, M. J. Dabney and others.

Marianna, Ark.—Griffs-Newben Company Incorporated with \$25,000 capital stock by D. L. Griffs (president), W. D. Newben and P. G. Newben.

Maryland—Land Improvement.—Uriah D. Seltzer of the Seltzer Heating Co., 941 Westminster street N. W., Washington, D. C.; C. O. Booth and A. Hoss, both of Lebanon, Pa., have purchased 173 acres of land in Maryland and have formed the Alta Park Realty Co. for development. Property is being surveyed and will be divided into lots with 100 feet frontage and into 5 and 10-acre tracts. Address 1413 G street, Washington, D. C.

Memphis, Tenn.—Grapefruit.—Peninsular Grapefruit Co. Incorporated with \$20,000 capital stock by R. H. Polk, Memphis, Tenn.; W. B. Harper, Birmingham, Ala., and E. B. Waples, Wilmington, Del.

Memphis, Tenn.—Abattoir.—S. G. Scott will establish abattoir 70x160 feet, with facilities for slaughtering and storing 150 head of cattle per day, with proportionate number of hogs, sheep, etc.; yard will cover about nine acres; cost \$25,000. Construction has begun.

Minden, La.—Amusement Park.—Minden Traction Co., H. A. Davis and J. B. Story, promoters, contemplate building amusement park.

Mobile, Ala.—Floral Company.—Minge Floral Co. Incorporated with \$20,000 capital stock to cultivate flowers and plants; has purchased 10 acres of land as site for greenhouses, gardens, etc.; also contracted for 60-horse-power boilers with steel tubing for steam heat to supply 10 greenhouses; will cover 26,000 feet of ground with glass; Maria Minge, president; Wyndham Lyon, secretary-treasurer and W. M. Bailey, manager; offices at 100 St. Joseph street.

Muskogee, Okla.—Building.—Pioneer Building Co. Incorporated with \$20,000 capital stock by G. C. Butte, A. C. Trumbo and E. O. Clark.

Muskogee, Okla.—Oil Wells.—Lone Star Oil Co. Incorporated with \$10,000 capital stock by William D. Fork, Robert Jordan and M. Jordan.

Nashville, Tenn.—Amusement Company.—Crescent Amusement Co. Incorporated with \$5000 capital stock by W. Sheridan Kane, T. J. Nance, W. P. Ready and others.

Nashville, Tenn.—Cleaning Works.—French Dry Cleaning Co. Incorporated by Herman Steltzer, Herman Brown, Pat Levy, Joseph Eaton and others.

New Orleans, La.—Land Improvement.—Sabine Land Co. Incorporated with \$50,000 capital stock; William Allen, president; Gustave Lemle, vice-president, and A. Steiner, secretary-treasurer.

New Orleans, La.—Planting Company.—Woodward Planting Co. Incorporated with \$15,000 capital stock to engage in land reclamation, planting, etc.; J. R. Woodward, president; E. L. Page, vice-president, and A. B. Graves, secretary-treasurer.

New Roads, La.—Oil Wells.—Pointe Coupee Mineral Oil Co. organized with \$300,000 capital stock to drill for oil; A. D. Vignes, president; Alfred Bacclochi, vice-president; Ernest C. Claiborne, treasurer, and R. A. Davis, Morganza, La., secretary.

Norfolk, Va.—Land Improvement.—Homestead Development Co. Incorporated with \$100,000 capital stock; T. B. Gordon, president; F. J. Cunningham, vice-president; A. L. Miller, secretary, and P. T. Collins, treasurer.

Oklahoma City, Okla.—Oil Wells.—Dixie Oil Co. Incorporated with \$1,000,000 capital stock by John W. Crego and J. A. Oskump, both of Kansas City, Mo., and E. L. McGee, Guthrie, Okla.

Okmulgee, Okla.—Oil and Gas Wells.—Checote Oil & Gas Co. Incorporated with \$125,000 capital stock by E. R. Hayes, R. D. Carpenter, T. F. Randolph and W. R. Alexander.

Okmulgee, Okla.—Oil and Gas Wells.—Flor-

ence Oil & Gas Co. Incorporated with \$10,000 capital stock by R. C. Winslow, Alex. Puston and W. C. Newman.

Pearsall, Texas.—Telephone System.—Orella Telephone Co. Incorporated with \$50,000 capital stock by Jesse H. Jones, E. C. Lamb and D. E. Garrett.

Petersburg, Va.—C. C. Alley Company Incorporated with \$50,000 capital stock; Walter S. Alley, president, New York, N. Y.; W. W. Warren, vice-president, and W. T. Baugh, secretary-treasurer, both of Petersburg.

Shawnee, Okla.—State Publishing Co. Incorporated with \$50,000 capital stock, merging Daily Herald of Shawnee and Pottawatomie County Democrat, Tecumseh; incorporators, W. E. Verity, U. S. Russell, both of Shawnee; Harry Foster, Tecumseh, Okla., and others.

St. Louis, Mo.—Electric Company.—Herald Electric Co., 323 Olive street, recently reported incorporated to conduct general electric enterprise, has elected R. S. McCully and C. G. Harrington managers.

St. Louis, Mo.—Ore Treatment.—Economic Ore Treatment Co., 806½ Chestnut street, recently reported incorporated, has elected C. A. Niel president, Dr. F. Hiller vice-president and W. F. Grady secretary-treasurer. E. C. Rice is chemist.

St. Louis, Mo.—Publishing.—Central Printing & Publishing Co. Incorporated with \$30,000 capital stock by William H. O'Brien, H. A. Waldron and Walter L. Scott.

St. Louis, Mo.—Printing Plant.—H. J. Reuter Printing Co. Incorporated with \$8000 capital stock by H. J. Reuter, Herman Sailer and L. A. Helling.

Tulsa, Texas—Grain Elevator.—Tulsa Commercial Club, W. A. Donaldson, president, is endeavoring to secure erection of grain elevator.

Tulsa, Okla.—Oil Wells.—Mary Virginia Oil Co. Incorporated with \$10,000 capital stock by Wallace Kempbell, C. Pace and W. A. Stuart.

Tulsa, Okla.—Oil & Gas Wells.—Kiefer Oil & Gas Co. Incorporated with \$500,000 capital stock by T. K. Hunt, T. C. Conroy and G. W. Updegraff.

St. Louis, Mo.—Land Improvement.—Coleman Land Co. Incorporated by George A. Riddle, John C. Bullis and William Levy.

Velasco, Texas—Land Improvement.—Brazos Coast Investment Co. Incorporated with \$100,000 capital stock by Charles J. Horn, Fred M. Schulz and Lewis B. Bryan.

Warsaw, Va.—Telephone System.—John A. Brockebrough is promoting construction of telephone system.

Washington, D. C.—Suburban Development.—Greater Washington Realty Corporation, 611 Colorado Building, has purchased 36 acres of the Radnor estate at about \$2000 per acre and will subdivide and develop as suburban residence section, to be known as Mount Washington. President of Company, T. C. H. Vance.

Washington, D. C.—Suburban Residential Developments.—Manor Realty Co., John H. Fisher, president, 1206 G street N. W., Washington, D. C.; Federal Realty Co., Dr. E. H. Leffler, president, Millersburg, Pa.; Stotts Park Realty Co. and Chillum Castle Realty Co., E. M. Berkley, president, Meyersdale, Pa., and the Blue Ridge Realty Co., Dr. H. E. Smith, president, Frederick, Md., have purchased about 420 acres of land costing about \$1,000,000 located in District of Columbia, north of the United States Soldiers' Home, and will develop it for suburban residential purposes.

Washington, D. C.—Suburban Development.—Harry R. Wilson, 715 5th street N. W., and Harry Wardman, 1333 G street N. W., has purchased block at 14th, Newton and Otis streets N. W. and Holmead place at \$102,000, which will be subdivided and improved; will divide into 102 building lots, each 20 feet front and from 60 to 88 feet in depth; two and three-story dwellings (six to ten rooms) will be built, to sell at \$1500 to \$1700; A. H. Beers, 717 14th street N. W., architect.

Watson, Ark.—Supplies.—M. & P. Supply Co. Incorporated with \$7000 capital stock by W. J. Massey (president), E. F. Massey, R. A. Preston and Henry Simms.

Weatherford, Texas—Hardware.—Weatherford Hardware Co. Incorporated with \$15,000 capital stock by W. W. Major, T. M. Dees and G. E. Love.

Wheeling, W. Va.—Steam Laundry.—White Swan Laundry Incorporated with \$50,000 capital stock by F. R. Scroggins, J. W. Ewing, N. C. Hubbard and others.

Whittles Depot, Va.—Telephone System.—Climax Telephone Co., G. W. Anderson, president, recently reported incorporated, will construct from 25 to 30 miles telephone line (metallic circuit) at cost of about \$1500. (See "Machinery Wanted.")

Winston-Salem, N. C.—Telephone System.—Reported that J. J. Kerney, C. D. Crouch, Charles Fordham and R. W. Mock have secured franchise to construct telephone system.

## MISCELLANEOUS MANUFACTURING PLANTS

Altoona, Ala.—Hardware and Manufacturing.—McEntire-Wagon-Thomas Company Incorporated with \$10,000 capital stock by R. L. McEntire, T. B. Wagon and L. E. Thomas.

Atlanta, Ga.—Trousers and Overalls.—Southern Pants & Overall Manufacturing Co. Incorporated with \$5000 capital stock by George W. Seay, T. E. Mauldin, M. I. Harrell and H. I. Weaver.

Baltimore, Md.—Lock Washer.—Universal Lock Washer Co. Incorporated with \$100,000 capital stock by William C. Schmeisser, 2801 Eutaw place; Charles F. Corning of Hubbs & Corning Company, 404 South Eutaw street, and James Oscar Preston, Commerce and Water streets, all of Baltimore, Md.

Beaumont, Texas.—Bottling Works and Candy Factory.—Coca-Cola Bottling & Candy Co., H. D. Smith, president, will establish plant with daily capacity of 10,000 bottles coca-cola and 1500 pounds candy; building is erected; recently mentioned. (See "Machinery Wanted.")

Belton, Texas—Cannery.—Commercial Club, Robert James, secretary, is in correspondence with capitalists relative to establishing cannery.

Blytheville, Ark.—Creamery, etc.—Holli-peter & Jontz, recently noted, will not establish creamery this year.

Brinkley, Ark.—Vinegar Works.—Walker Vinegar Co. Incorporated with \$5000 capital stock by F. P. Walker, J. M. McKie, W. A. Thomason and others.

Carlisle, Ark.—Cannery.—Carlisle Canning Co. will be incorporated with \$20,000 capital stock by Dan Lewis, Ernest Ellis, H. I. Butchley, J. C. Ash, T. L. Snell and others to establish cannery with daily capacity of 10,000 cans. J. W. Dixon, Flora, Ill., will erect building and install machinery.

Charlotte, N. C.—Fire-extinguishing Apparatus.—General Fire Extinguisher Co., main offices at Providence, R. I., has increased capital stock from \$4,000,000 to \$5,000,000 in connection with extension of general facilities and the establishment of the branch plants under construction at Charlotte and Atlanta, Ga. (Previously mentioned.)

Cynthiana, Ky.—Tobacco Factory.—John T. Farrell, Covington, Ky., proposes organization of company with \$25,000 capital stock to establish tobacco factory in Cynthiana.

Dallas, Texas—Chemical Plant.—Morris Chemical Co. Incorporated with \$15,000 capital stock by Gerard Dreyfuss, L. S. Kahn and L. L. Kramer.

Decatur, Ala.—Cigar Factory.—Manuel Carson, Tampa, Fla., is reported as contemplating establishment of cigar factory at Decatur.

Eufaula, Ala.—Canning Factory.—S. S. Ogletree and others of Eufaula Truckers' Association contemplate establishing canning factory. (See "Machinery Wanted.")

Fayetteville, N. C.—Stamp-vending Machines.—National Stamp Vending Machine Co. Incorporated with \$25,000 capital stock and privilege of increasing to \$100,000 by F. H. Steadman, A. J. Cook, J. R. Williams, M. L. Williams and others.

Fayetteville, N. C.—Mattress and Broom Factory.—Fayetteville Mattress & Broom Manufacturing Co. Incorporated with \$50,000 by L. L. Greenwood and Harlee Townsend, both of Fayetteville, and Mr. Fisher, Parkton, N. C.

Fort Worth, Texas—Tannery.—Kentucky capitalists will establish tannery in Fort Worth, investing about \$15,000; about 10 acres probably required as site. Fort Worth Factory Club can be addressed.

Fort Worth, Texas—Gas Plant.—City contemplates building gas plant to cost about \$300,000; Sam Davidson, City Commissioner.

Franklin, Va.—Cottonseed-oil Mill and Fertilizer Factory.—Franklin Cotton Oil & Fertilizer Co., recently reported incorporated, will build and equip cotton gin, but has not fully matured plans for making oil during coming season; J. M. Story, president. (See "Cotton Compresses and Gins.")

Fulton, Ky.—Flour Mill.—Browder Bros. will erect flour mill and grain elevator.

Greensboro, N. C.—Gas Plant.—Greensboro Electric Co. is reported to expend \$75,000 in construction of belt line gas main around city and enlargement and reconstruction of gashouse.

Greensboro, Ga.—Variety Works.—Company is being organized to establish variety works. Committee has been appointed, composed of



Dr. T. B. Rice, secretary; J. B. Park and others.

Gulfport, Miss.—Coffee Mills.—Gulfport Coffee Co. has been organized.

Hamlet, N. C.—Bottling Works.—Crown Carbonating Co. will erect brick building 50x100 feet, to be equipped as bottling works; F. C. Stone and J. P. Gibbons, proprietors.

Heflin, Ala.—Fertilizer Factory.—Heflin Fertilizer Co. incorporated with \$10,000 capital stock by Perryman Bros., Atkins & Owens, Bean & McMurray and J. W. Kitchens & Bro.

Hinton, W. Va.—Milling.—Hinton Milling Co. incorporated with \$25,000 capital stock by J. A. Graham, C. C. Coalter, R. I. Maxwell and others.

Horse Cave, Ky.—Tobacco Factory.—Hart County Tobacco Manufacturing Co. organized with \$10,000 capital stock; John Piers, president; August Vial, vice-president; Henry L. Patten, secretary, and John Altscheler, treasurer.

Huntingdon, Tenn.—Medicines, etc.—Paris Chemical Co., W. E. Hailey, president, has established plant for manufacture of proprietary medicines and poultry and stock powders.

Huntsville, Ala.—Cannery.—L. Lawrence, Bridgeport Canning Machinery Co., Bridgeport, Ala., will install canning factory at Huntsville to have daily capacity of 5000 cans.

Jacksonville, Fla.—Bottling Works.—Beddingfield & Co. incorporated with \$10,000 capital stock to establish plant for manufacturing and bottling liquors and mineral waters. Edward Loh, Macon, Ga., president; John H. Donahue, vice-president, and Jerome Herman, secretary-treasurer, both of Jacksonville.

Jesup, Ga.—Cigar Factory.—Jesup Cigar Manufacturing Co., recently reported incorporated, will establish plant with 2000 daily capacity; manager, F. C. Hinson.

Johnson City, Tenn.—Flour Mill.—Model Mill Co. incorporated with \$100,000 capital stock to establish mill with daily capacity of 200 barrels of wheat flour and 2400 bushels of corn. Plans are being prepared for erection of reinforced-concrete building. About \$50,000 will be invested. A. L. Bauhard, Bristol, Va.-Tenn., is president and general manager. W. H. Small, Indianapolis, Ind., and James B. Jackson, Altpass, N. C., are among incorporators.

Joplin, Mo.—Piano Factory.—Hoffman Bros. Piano Co. incorporated with \$100,000 capital stock by S. F., Edward E. and L. S. Hoffman.

Kansas City, Mo.—Milling.—Chamberlain-Myers Milling Co. incorporated with \$20,000 capital stock by George W. Chamberlain, John Meyers, Mary J. Meyers and others.

Kansas City, Mo.—Bits.—Kansas City Bit Co. incorporated with \$25,000 capital stock by Linsey Hicks, A. Linville, W. H. England and others.

Kansas City, Mo.—Lens.—Stead Lens Co. incorporated with \$50,000 capital stock by S. W. Noggle, W. J. Lowe and John N. Orr.

Little Rock, Ark.—Medicines.—Gregory Medicine Co. incorporated with \$50,000 capital stock by C. W. Gregory, H. E. Cunningham, M. W. Fleming and W. L. Catley.

Little Rock, Ark.—Rice Mill.—Company organized to establish rice mill, investing about \$50,000. R. W. Polk, chairman Board of Trade, can give information.

Louisville, Ky.—Caps.—National Cap Manufacturing Co. incorporated with \$20,000 capital stock by John R. Pfang, John H. Wilson and Julius Hyman.

Louisville, Ky.—Asphalt Repair Plant.—City is considering establishment of asphalt repair plant to cost about \$11,000. Address The Mayor.

Louisville, Ky.—Piano Factory.—Gray & Haws have prepared plans for piano-manufacturing plant; two stories; equipped with machinery for reduction of raw wood and metal to finished product and power plant; office building, 200x400 feet; cost \$800,000.

Nashville, Tenn.—Chemical Manufacturing.—Pepsol Chemical Co., Wm. D. Mayo, president and manager, increased capital stock to \$25,000. (Recently incorrectly noted as "Pepsol Company.")

Nashville, Tenn.—Toys.—National Toy & Manufacturing Co. incorporated with \$20,000 capital stock by T. A. Killman, John F. Draughton, Volney James, E. H. Ray and others.

Nashville, Tenn.—Confectionery.—American Confectionery Co. has increased capital stock from \$60,000 to \$120,000.

Nesha, Mo.—Harness Manufacturing.—W. T. Matters Hardware, Harness & Vehicle Co., recently reported incorporated (under

"Miscellaneous Enterprises"), will manufacture harness; will also deal in hardware and vehicles.

New Decatur, Ala.—Grist Mill.—Robert Watson is erecting frame building which will be equipped as grist and sawmill.

New Orleans, La.—Roofing.—Standard Manufacturing & Construction Co. incorporated with \$25,000 capital stock by W. T. Nolan, A. W. Stewart and William Doell to manufacture asphalt and other roofing.

New Orleans, La.—Coffee Mills.—Valley Mills Coffee Co. incorporated with \$50,000 capital stock; Charles Gustave Durel, president and manager; John A. M. Wilson, secretary-treasurer.

Norfolk, Va.—Paint Factory.—Pannill Paint Manufacturing Co. incorporated with \$25,000 capital stock; W. G. Davis of Norfolk, president; H. B. Pannill, Petersburg, Va., vice-president and general manager, and J. H. Johnston, secretary-treasurer.

Oklahoma City, Okla.—Tobacco Factory.—L. B. Alderman Leaf Tobacco Co. incorporated with \$50,000 capital stock by E. L. McGeown of Guthrie, Okla.; G. B. Alderman and B. L. Alderman, both of Sulfeld, Conn.

Oklahoma City, Okla.—Buggy Curtain Fasteners.—Cregger Buggy Curtain Fastener Co. incorporated with \$25,000 capital stock by E. L. McGeown of Guthrie, Okla.; A. L. Cregger and Pearl Cregger, Des Moines, Iowa.

Oklahoma City, Okla.—Milling.—New Cumberland Milling Co. incorporated with \$25,000 capital stock by J. H. Reiff and W. O. Haverstock, both of New Cumberland, Pa., and E. L. McKeown, Guthrie, Okla.

Oklahoma City, Okla.—Manufacturing.—Linville Manufacturing Co. incorporated with \$40,000 capital stock by E. L. McGeown, Guthrie, Okla.; Logan Linville and Thomas Linville, both of Charleston, W. Va.; Logan Linville, general manager; company has not announced plans.

Oklahoma City, Okla.—Feed Mills.—Lybrand-Evans Mill & Feed Co. incorporated with \$15,000 capital stock by W. E. Seaman and W. A. Lybrand, both of Oklahoma City; Lucius Lybrand, Terre Haute, Ind., and others. This is a reincorporation, and full operations will be resumed at plant; main output, alfalfa meal; daily capacity two carloads.

Paducah, Ky.—Flour Mill.—Northern capitalists are corresponding with Paducah Commercial Club, Saunders A. Fowler, secretary, relative to establishing flour mill in Paducah.

Parkersburg, W. Va.—Paper Products.—West Virginia Paper Products Co., recently reported incorporated to manufacture sanitary paper milk bottles, will also make oyster and ice-cream pails, mailing tubes, shoe boxes, butter dishes, suit and laundry boxes; daily capacity milk bottles, 25,000; approximate cost of machinery \$8000. Forest C. Goff, president and general manager; Dr. H. B. Stout, vice-president; Lawrence M. McCluer, secretary and treasurer. (See "Machinery Wanted.")

Pine Bluff, Ark.—Pulp Manufacturing.—W. B. Carr, secretary George Knapp Company, St. Louis, Mo., and others are reported as contemplating establishment of pulp-manufacturing plant in Pine Bluff.

Pocahontas, Ark.—Grist Mill, etc.—Pocahontas Milling Co. will rebuild plant recently reported burned; plans not fully decided; grist and feed mill contemplated, and perhaps elevator.

Ponca, Okla.—Mill and Elevator.—Farmers' Mill & Elevator Co. incorporated with \$25,000 capital stock by James M. Van Winkle, C. E. Hall and Dennis Mooney.

Rosepine, La.—Cannery.—Truck Growers' Association contemplates organizing company to establish cannery.

Shreveport, La.—Cannery.—Company is being organized with probably \$15,000 capital stock to establish cannery at Jewella with daily capacity of 16,000 cans. Entire equipment will be furnished by the O. Pressprich Company, New York; cost about \$9000.

Shreveport, La.—Chemical Plant.—Virginia-Carolina Chemical Co. (main offices Richmond, Va.) is reported to expend \$75,000 in improvements to Shreveport plant.

Stewartsville, Mo.—Manufacturing.—Porter-Groton Manufacturing Co. incorporated with \$100,000 capital stock by Virgie R. Porter, Henry R. Gotron, E. P. Cornish and others.

St. Louis, Mo.—Roofing Materials, Paints, etc.—Mississippi Valley Steel & Roofing Co. incorporated with \$10,000 capital stock by William H. Woerheide, John Mesker, B. D. Kribben and John Mesker to manufacture roofing materials, paints, etc.

St. Louis, Mo.—Bottling Works.—Western Mineral Water Co. incorporated with \$10,000 capital stock by Albert H. and Charles W.

Spellmeyer, Michael B. Bardel and Louis Loesch.

Talladega, Ala.—Flour Mill.—Reported that Mr. Clark of the Bingham mill will add flour mill.

Terrell, Texas.—Cannery.—R. T. Carlisle (representing New York company) has submitted proposition to Terrell Commercial Club for establishment of cannery.

Tull, Ark.—Cannery.—Farmers' Union will establish cannery.

Tulsa, Okla.—Ice-cream Factory.—Reported that J. Shumway, Kansas City, Mo., contemplates establishing ice-cream factory in Tulsa.

Washington, D. C.—Automobile Wheels.—American Pneumatic Hub Wheel Co. incorporated with \$50,000 capital stock by Albert H. Collins, care of the Savoy; Thomas M. Owens, 818 17th street, N. W.; Charles F. Diggs, 412 5th street, N. W., and others. (Lately mentioned.)

Washington, D. C.—Ice-cream Factory.—Chapin-Sacks Manufacturing Co., 1st and M streets, N. E., has had plans prepared for erection of additional building to be equipped for manufacturing ice cream; structure will be 48x110 feet; interior finish of walls of white enamel brick; white tile ceilings; monolithic floors; capacity 4000 gallons daily.

Wastella, Texas.—Flour Mill.—A. McMahon is considering establishment of flour mill.

White Bluffs, Tenn.—Grist Mill.—Albert Slayter will build grist and planing mill equipped with gasoline engine.

Wheeling, W. Va.—Manufacturing Chemical Plant and Glass Works.—Company organized to establish chemical plant for manufacturing proprietary products and glass plant to manufacture bottles; capital stock will probably be \$500,000; Addison Thompson, National Glass Co., Pittsburgh, Pa., president; W. G. Giessen, Carnegie Steel Co., Belaire, Ohio, vice president, and C. K. Dankworth, Jr., Wheeling, secretary-treasurer.

## RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Houston, Texas.—Missouri, Kansas & Texas Railway, J. W. Petheram, chief engineer, Dallas, Texas, will not at present make improvements recently reported.

Wood (not a postoffice), Texas.—Gulf, Colorado & Santa Fe Railway, C. F. W. Felt, chief engineer, Galveston, Texas, is reported to expend \$500,000 in construction of terminal facilities at Wood, including roundhouses, oil and water stations, yardage, trackage, etc.; also planning to have two or three tugs in service at Port Bolivar for transferring loads, each boat to have four tracks with space for five cars on each track.

## ROAD AND STREET IMPROVEMENTS

Birmingham, Ala.—Board of Revenue is preparing to build about six miles of macadam road in Jefferson county. D. W. Hanby and D. S. McLean have been awarded contract at \$1.10 per cubic yard for cherting Irondale road; bids have been advertised for improvement of Mulguy road, and work will soon begin on betterment of Blue Creek road. Bids for 10-ton roller will be opened February 15. Mr. Milner, County Surveyor, has prepared specifications and will supervise work. (See "Machinery Wanted.")

Columbia, S. C.—Georgia Engineering Co., Augusta, Ga., has begun the paving of 16 blocks on Main street with vitrified brick; contract price, \$173,500.19. Grading is in process, and construction of storm-drains and catch-basins will soon begin; J. L. Ludlow, Winston-Salem, N. C., engineer; Fingal C. Black, resident engineer; H. J. Strickland, representing contractors, will superintend paving. (Mentioned in January.)

Decatur, Ala.—Morgan county will vote March 11 on issuance of \$200,000 of bonds for construction of macadamized roads; civil engineer will soon begin surveys. William E. Skeggs, probate judge.

Durham, N. C.—Durham County Commissioners have awarded contract to R. I. Peters of Peters Construction Co., Knoxville, Tenn., at \$90,610, for grading and macadamizing Roxboro road; to be 11.61 miles long; Gilbert C. White, engineer. (Mentioned in November.)

Gainesville, Ga.—Hall county is considering an election to vote on issuance of \$150,000 of bonds for macadamizing roads. Address County Commissioners.

Huntsville, Ala.—Gray Shale Paving & Brick Co., Birmingham, Ala., has contract at \$2,450 for paving of streets around public square at Huntsville. City will issue \$18,000 of bonds.

Loch Raven, Md.—Maryland School for Boys will expend about \$20,000 for road building and grading and construction of water-supply system; Maurice Laupheimer, secretary, 601 Calvert Building.

Louisville, Ky.—City is planning street improvements for 1908; to expend about \$150,000; Alex. G. Barret, chairman Board of Public Works.

Nottoway, Va.—Nottoway County Commissioners will construct five miles of macadam road.

Shawnee, Okla.—Paving Plant.—City contemplates establishment of paving plant to cost about \$8000. Address The Mayor.

Norton, Va.—City will vote on issuance of \$20,000 street and sidewalk bonds. Address The Mayor.

Taylor, Texas.—City contemplates voting April 14 on issuance of \$15,000 of bonds for improvement of streets and sidewalks. Address The Mayor.

## SEWER CONSTRUCTION

Afton, Okla.—City will vote on issuance of bonds to construct sewerage system. Address The Mayor.

Athens, Ga.—City will vote on issuance of \$50,000 of bonds for construction of sewer system. Address The Mayor.

Floral, Ala.—City is preparing to construct sewerage system, for which \$5000 of bonds have been voted; R. H. French, Mayor.

Galveston, Texas.—City contemplates constructing vitrified sewers; will award contract February 13. H. C. Lange, Commissioner Water-Works and Sewerage; A. T. Dickey, City Engineer; John D. Kelley, City Secretary. (See "Machinery Wanted.")

Hobart, Okla.—City has awarded contract for construction of storm-water sewer system, and construction work will soon begin; bond issue of \$65,000 is available for construction of sewer system and water-works; A. W. Kerr, City Clerk. (Mentioned in October.)

Hot Springs, Ark.—City will construct sewer system in District No. 24, to cost about \$30,312.72; M. H. Jodd, Mayor; Otis Copelin, City Clerk.

Louisville, Ky.—City is inviting bids for construction of Section B of southern outfall sewer contract No. 2, under \$4,000,000 bond issue; P. L. Atherton, chairman, and Charles P. Weaver, secretary-treasurer, Commissioners of Sewerage. (See "Machinery Wanted.") (Recently mentioned.)

Lufkin, Texas.—City will construct sewerage system. Address Mayor Shearer.

Washington, D. C.—Contract will be awarded March 2 for construction of sewers in District of Columbia; Henry B. F. Macfarland, Commissioner, D. C. (See "Machinery Wanted.")

## TEXTILE MILLS

Albany, Ga.—Cotton Yarns.—Smith D. Pickett and others will organize company to build 10,000 spindle mill, driven by electricity. J. B. Sirrine of Greenville, S. C., will be engineer in charge.

Ball Ground, Ga.—Cotton Cloth.—Ball Ground Cotton Mills has awarded contract to S. L. Clay & Son of Cedartown, Ga., for construction of buildings for proposed mill; structures to include main building two stories high, 75x320 feet, with dormer roof; picker room 32x75 feet; dyehouse 75x90 feet; engine and boiler rooms each 40x40 feet; plant will have 10,000 spindles and 300 looms. Other details previously reported. A. J. Lovelady, president of company.

Blakely, Ga.—Cotton Goods.—C. M. Deal is reported as interested in plan for organization of company to build cotton mill.

Cedartown, Ga.—Cotton Hosiery.—Southern Hosiery Mills incorporated with capital stock of \$20,000 by J. W. Ferguson, I. F. Mundy, R. R. Beasley and others.

Concord, N. C.—Cotton Cloth.—Edgemere Manufacturing Co. will increase capital stock from \$25,000 to \$100,000; now operating 1800 spindles and 96 looms.

Morganton, N. C.—Cotton Yarns.—Alpine Cotton Mills will build addition of brick, 75 feet long, for packing and storing room for Mill No. 1.

Ozone, Tenn.—Hosiery or Underwear.—L. H. Stone and associates propose to establish mill for knitting hosiery or underwear. No arrangements made for machinery. (See "Machinery Wanted.")

Newnan, Ga.—Cotton Yarns.—Newnan Cotton Mills is renewing its charter and providing for privilege of increasing to \$2,500,000 when desired; capital stock is now \$500,000. Company now operates 59,000 ring spindles.

Oxford, Ala.—Cotton Cordage.—Planters' Manufacturing Co. is reported as having

awarded contract for textile machinery to triple capacity of its cotton cordage mill, and that it contemplates further improvements.

Rock Hill, S. C.—Cotton Yarns.—Wymojo Yarn Mills' mill building (J. J. Keller & Co. lately noted as contractors) will be one story high; 127½x310 feet; monitor roof, 17½-foot story at eaves and 20 feet under monitor; capacity 10,000 spindles, but only 5000 to be installed at start; electricity furnished by Southern Power Co. of Charlotte, N. C., will drive textile machinery; product 24s. to 30s. two and 8s. three-ply yarns. Keller & Co. also have contract to build 42 cottages—2 of five rooms, 30 of four rooms, 10 of three rooms. O. A. Robbins, Charlotte, N. C., is mill engineer in charge of construction and equipment. Company's president is W. W. Moore, and capital stock is \$150,000. (Previously reported briefly; title heretofore stated was not correct.)

Siluria, Ala.—Cotton Cloth.—Siluria Cotton Mills incorporated with capital stock of \$250,000; E. J. Smyer, president; W. T. Poe, vice-president, and B. A. Thompson, secretary. Company is continuation of Siluria Cotton Mill Co., operating 10,336 spindles and 200 looms.

### WATER-WORKS

Afton, Okla.—City will vote on issuance of bonds for construction of water-works. Address The Mayor.

Bastrop, Texas.—Robert Bayne, Fort Worth, Texas, has purchased water and light plant at Bastrop. He will make improvements.

Blacksburg, Va.—Virginia Polytechnic Institute will erect standpipe with which pipes can be connected for supplying water to dwellings and stores in Blacksburg; Mr. Barringer, president.

Childress, Texas.—City will award contract March 3 for construction of water-works; Joseph H. Aynsworth, City Secretary. (See "Machinery Wanted.")

Columbus, Ga.—City Council has confirmed contract between Board of Water Commissioners and Hudson Engineer & Contracting Co., New York, N. Y., for drilling artesian wells, yielding 5,000,000 gallons of water daily; contract price \$83,000. (Previously mentioned.)

Florida, Ala.—City has adopted plans by J. B. McCreary & Co., Atlanta, Ga., for construction of water-works to cost about \$20,000; \$30,000 of bonds have been voted; R. A. French, Mayor. (Recently mentioned.)

Fort Smith, Ark.—Municipal Water Works Co. will build addition to plant.

Hobart, Okla.—T. C. Brooks, contractor for extension of water-works, will soon begin work; bond issue of \$65,000 is available for water-works and sewer system; A. W. Kerr, City Clerk. (Mentioned in October.)

Hope, Ark.—City will erect power-house and install engine and dynamo; recently mentioned; Charles M. Richards, superintendent. (See "Electric Light and Power Plants.")

Leslie, Ark.—Williams Cooperage Co. is extending water-works system.

Loch Raven, Md.—Maryland School for Boys will expend about \$20,000 for construction of system for supplying water and for road improvements; Maurice Laupheimer, secretary, 601 Calvert Building.

Newport News, Va.—City contemplates petitioning Legislature for authority to issue \$1,000,000 of bonds for constructing water-works. Address The Mayor.

Oklahoma City, Okla.—Dimmick Pipe Co., St. Louis, Mo., has contract to furnish 885 tons of cast-iron pipe at \$27.55 per ton, and 10 tons of bell and spigot castings at three cents per pound, to be used in extension of water works system, for which \$50,000 will be expended. (Recently mentioned.)

Tulsa, Okla.—The Water-Works Company is having plans prepared for installation of filtration system to cost about \$30,000; three sinking basins will be provided, and water, which will be obtained from Arkansas river, will be given chemical treatment; present capacity will be tripled; mains will be extended; contracts for installation will soon be awarded.

Urbana, Va.—City will install water-works system consisting of 15,000-gallon tank on 50-foot tower, gasoline engine, four-inch mains and fire plugs. Bonds for \$8000 will be issued. Address The Mayor. (See "Machinery Wanted.")

Wilmington, N. C.—Agricultural & Mechanical College will expend \$10,000 to furnish water supply. Arrangements will be made with Wake Water Co. to lay mains, furnish hydrants, etc.

### WOODWORKING PLANTS

Charlottesville, Va.—Locust Pins, etc.—Virginia Turning Corporation, successor to U. S. Locust Pin Co., will incorporate to continue manufacture of insular locust pins; will do general turning; also make squares and blocks (for furniture factories) of oak, chestnut and poplar, and blocks of dogwood and persimmon for shuttle and bobbin factories; general manager, C. R. Randolph.

Chattanooga, Tenn.—Boxes.—Star Box & Printing Co. has increased capital stock from \$15,000 to \$30,000.

Chattanooga, Tenn.—Singletrees.—American Singletree Co. incorporated with \$5000 capital stock by J. B. and C. W. Robinson, W. N. Kyle, W. B. Garwin and Samuel Rogers.

Clifton Forge, Va.—Furniture and Caskets.—Smith Bros. Coffin & Casket Co. incorporated with \$15,000 capital stock; J. S. Smith, president; W. K. Smith, secretary-treasurer, both of Clifton Forge, and W. B. Smith, Richmond, Va., vice-president.

Dardanelle, Ark.—Boxes.—Conlee & Walker are removing planing mill to new location and will add box factory.

Eureka Springs, Ark.—Wagon Materials.—Granger-Gelley Lumber Co. has purchased timber property of Baker Lumber Co. and will establish plant at Eureka Springs for manufacturing wagon spokes, hubs, ax handles, etc. Company now controls about 17,000 acres of timber land estimated at nearly 100,000,000 feet; F. E. Ayres, president.

Hagerstown, Md.—Sash Factory.—Solomon George, T. M. Hobbs and A. H. Foghtman, all of Cumberland, Md., will erect sash factory and planing mill one story high, 60x100 feet; warehouse three stories high, 50x105 feet, and lay about 700 feet of siding. Mr. George will be in charge.

Hagerstown, Md.—Sash Factory.—Reported that Solomon George, G. M. Hobbs and A. H. Foghtman, Cumberland, Md., contemplate establishing sash factory in Hagerstown.

Laurinburg, N. C.—Window Screens, etc.—Colonial Screen, Venetian Blind & Door Co., reported incorporated in October with \$50,000 capital stock to manufacture window and door screens, venetian blinds, etc., has elected Walter H. Neal president, D. E. Harlee vice-president, Mac Cameron general manager and treasurer, and I. U. Kincaid superintendent manufacturing department. Company will erect and equip buildings at cost of \$9000.

Little Rock, Ark.—Shuttle Blocks.—Standard Block Co. will establish plant for the manufacture of shuttle blocks; will erect building 48x96 feet; frame; corrugated iron; cost \$8000; daily capacity about 5000; managers, A. K. Kline and C. M. Bugbee. (Recently mentioned.)

Oklahoma City, Okla.—Furniture.—Levy-Tucker Furniture Co. incorporated with \$16,000 capital stock by F. G. Hawka, C. Lid Tucker, W. N. Laughdrill and others.

Selma, Ala.—Baskets, Boxes, etc.—Bridgeport Woodenware Co., Bridgeport, Ala., will establish plant at Selma for manufacturing baskets, crates, boxes, etc.

St. Louis, Mo.—Templets.—Templet Manufacturing Co. incorporated with \$50,000 capital stock by Harry B. Ash, Andrew L. Wright and Gus S. Kann.

Womble, Ark.—Stave Mill.—Arkadelphia Milling Co., Arkadelphia, Ark., will operate sawed stave factory.

### BURNED

Atoka, Okla.—Atoka county's courthouse; loss \$20,000. Address County Commissioners.

Benton, Ky.—J. M. Johnson's flour mill; loss \$12,000.

Canton, Miss.—T. L. Tucker's store building; Pratt & Reid's building; Canton Picket Publishing Co.'s printing plant.

Charlotte, N. C.—Charlotte Clothing Manufacturing Co.'s plant; loss \$40,000.

Cleveland, Miss.—Building owned by Mrs. J. L. McLean and occupied by Ed B. Hill, Cumberland Telephone & Telegraph Co.'s exchange and others; loss on building \$4500.

Clinton, La.—Building owned by Isidor Mayer; loss \$6700. Belmont Hotel, George T. Norwood, proprietor; loss \$7000.

Cornling, Ark.—G. A. Booser's drykline.

Covington, Ky.—Newport Rolling Mill Co.'s plant; Licking Coal & Iron Co.'s plant; total loss \$175,000.

Des Arc, Ark.—Planters' Oil Co.'s plant damaged; loss \$10,000.

Dinwiddie, Va.—Cortland Van Rensselaer Hall, main building of the Dinwiddie Agricultural and Industrial School; loss \$20,000.

Dublin, Ga.—Hobbs, Baggett & Co.'s storage warehouse; J. R. Ryle's cotton warehouse; loss \$10,000.

Dycusburg, Ky.—Bennett Bros.' tobacco warehouse and distillery; loss \$40,000.

Ellenboro, W. Va.—Cook Bros.' livery barn; loss \$6000.

Fort Worth, Texas.—Speer Printing Co.'s plant damaged; loss \$2000.

Gordon, Texas.—Wright Hotel; loss \$7000.

High Point, N. C.—Southern Car Co.'s main plant; loss between \$80,000 and \$100,000; J. Elwood Cox, president.

Hot Springs, Ark.—D. J. Smith's residence; loss \$10,000.

Jefferson, Texas.—Clark & Boice Lumber Co.'s drykline; loss \$12,000.

Labadieville, La.—T. J. Toups & Co.'s store building and residence; loss \$12,000.

Live Oak, Fla.—E. J. Blume's cotton gin; loss \$4000.

New Orleans, La.—Raymond Alberti's residence and store building; loss \$13,000.

New Orleans, La.—Record Oil Refining Co.'s stable; Union Naval Stores plant; total loss \$50,000.

Norman, Okla.—Mrs. Ora Jackson's residence; loss \$25,000.

Palatka, Fla.—Rodman Lumber Co.'s lumber plant; loss \$25,000.

Rodman, Fla.—Cummings Lumber Co.'s sawmill; loss \$25,000.

Simpson, W. Va.—McGraw Coal Co.'s New York Mines; John T. McGraw, Grafton, W. Va., president.

St. Francisville, La.—True Democrat Publishing Co.'s plant; loss \$3000.

Sunset, Texas.—F. M. Bone's cotton gin; loss \$5000.

Vinegar Bend, Ala.—Southern Lath & Shingle Mills Co.'s plant; loss \$15,000.

Wauchula, Fla.—The City Bakery.

Waxahachie, Texas.—Waxahachie Storage Co.'s warehouse; loss \$5000.

Wheeling, W. Va.—Union school building; loss \$50,000. Address School Commissioners.

Wilmington, N. C.—Cape Fear Lumber Co.'s plant; loss \$100,000.

### BUILDING NOTES

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

### APARTMENT-HOUSES

Birmingham, Ala.—E. N. Cullom has begun erection of proposed apartment-house; 9 or 10 apartments; brick and stone; 200x210 feet; laundry equipped with porcelain tubs, heaters for irons, etc., all nickel-plated; bathroom to have porcelain tubs and lavatory with nickel finishings and have floor and walls to height of three feet lined with ceramic tile; heated with city steam; cost about \$75,000.

Charlotte, N. C.—George E. Wilson has contracted with Hunter & Vaughn to design and build double apartment-house; pressed-brick front; stone trimmings; cost \$7000.

Memphis, Tenn.—Mrs. W. L. Smith will erect apartment-house; two stories; frame; 12 rooms; slate roof; cost, including heating plant, \$7500; C. E. Wade, contractor.

St. Louis, Mo.—Freund Realty Co., 9th and Soudard streets, is having plans prepared by William A. Lucas, Odd Fellows' Building, for erection of apartment-house 100x42 feet; brick and stone; three stories; cost \$35,000. (Mentioned in December.)

St. Louis, Mo.—Butte Realty Co. has organized Bachelor Building Co. with \$125,000 capital stock to erect apartment-house; six stories and basement, 65x65 feet; exterior of basement either of Carthage or Bedford cut stone; first story of white terra-cotta and above of pressed brick; interior construction of steel-frame type with reinforced concrete floors; bathrooms to have shower baths and tile flooring; bed chambers and bathrooms of white-enamel finish; electric elevator; cost \$150,000; plans by H. W. Beardsley, who will superintend construction.

Washington, D. C.—Fred Kraus, 910 13th street N. E., will erect store and apartment-house at 13th street and Florida avenue, according to plans by Julius Wenig, 1223 F street N. W.; structure will be three stories; brick and stone; tin roof; electric fixtures; hot-water heat. Bidders are P. Fersinger, 1 N street N. W.; S. J. Brinkley, 1322 South Capitol street; W. C. Blundon, 30 Irving street; J. C. Delchman, 1627 Trinidad avenue N. E. Bids will be opened February 24.

### BANK AND OFFICE BUILDINGS

Alexandria, Tenn.—Bank of Alexandria will erect bank building; 25x70 feet; mill

construction; cost \$5000; plans by J. L. Richards; contract awarded.

Baltimore, Md.—Ephraim Macht, Equitable Building, will erect office building at 11 East Fayette street; facade of brick and stone, and window treatment in stamped metal fascia. A. Lowther Forrest, architect, Professional Building, has prepared and submitted plans and specifications to contractors. Following will submit estimates: Morrow Bros., 2026 Bolton avenue; R. B. Mason, 515 East 30th street; George Bunneke & Sons, 104 South Patterson Park avenue; B. F. Bennett Engineering Co., 123 South Howard street; David M. Andrew Company, Vickers Building, and Engineering-Contracting Co., American Building.

Birmingham, Ala.—Reported that plans are being considered for erection of office building on site 100x140 feet, owned by the Jordan estate, represented by I. F. Young and W. G. Oliver. Structure will be 12 stories high; frontage 140 feet; steel; fireproof; seven elevators; cost \$750,000.

Birmingham, Ala.—Reported that Empire Construction Co. is having plans and specifications prepared for erection of office building; steel frame; 15 stories; site 50x100 feet. Address care of Jemison Real Estate & Insurance Co.

Conyers, Ga.—Drs. W. H. Lee & Son will open bids March 15 for erection of building mentioned in January; two-story; two rooms on each floor; business rooms on first floor, offices above; ordinary construction; electric lighting; cost about \$8000. (See "Machinery Wanted.")

Elizabeth City, N. C.—D. B. Bradford will erect two-story brick store and office building.

Fort Smith, Ark.—First National Bank will erect bank and office building; six stories; steel and reinforced concrete; fireproof.

Thorndale, Texas.—Thorndale State Bank, J. C. Holloman, cashier, will open bids February 17 for erection of two-story brick bank building. Plans and specifications on file.

Washington, D. C.—Dime Savings Bank, M. D. Rosenberg, president, has purchased the May Building at northeast corner 7th and E streets, and will expend between \$30,000 and \$40,000 in remodeling structure as bank and office building; two additional stories will be erected.

### CHURCHES

Bay St. Louis, Miss.—Trustees Catholic congregation are considering plans by architects of New Orleans, La.; Biloxi, Miss., and Mobile, Ala., for rebuilding of edifice previously reported burned. Address The Pastor, Catholic Church.

Belair, Md.—Grace Methodist Protestant Church will erect edifice at a cost of \$5000 to replace burned structure. Address Pastor, Grace Methodist Protestant Church.

Cordele, Ga.—First Methodist Church has had plans prepared by Charles Edward Choate, 403 and 404 Dyer Building, Augusta, Ga., for proposed edifice, 96x99 feet; pressed brick; terra-cotta and stone; classic design.

Corsicana, Texas.—Episcopal congregation has awarded contract to local contractors at about \$14,000 for erection of brick edifice. Address The Pastor, Episcopal Church.

Greensboro, N. C.—Spring Garden Methodist Episcopal Church South is having preliminary plans prepared by Hook & Rogers, Charlotte, N. C., for erection of church edifice to cost from \$15,000 to \$18,000; pressed brick or stone; seating capacity of auditorium, Sunday-school room and gallery, 800; G. W. Ward, chairman building committee; N. R. Richardson, pastor; bids to be opened March 5 or later. (See "Machinery Wanted.")

Jackson, Mo.—M. E. Church, South, is ready to let general contract for erection of edifice recently mentioned; plans by Matthews & Clarke, Missouri Trust Building, St. Louis, Mo.; will contract later for installation of heat, light, glazing and pipe organ; Rev. M. T. Haw, pastor.

Little Rock, Ark.—Hunter Memorial M. E. Church, Rev. Forney Hutchinson, pastor, will erect chapel to cost about \$15,000, and also contemplates erection of church building upon completion of chapel, to cost about \$25,000.

Norfolk, Va.—Park Place Church, Rev. Dr. T. N. Potts, pastor, contemplates erection of auditorium.

Paducah, Ky.—Trimble Street Methodist Church, Rev. G. W. Banks, pastor, is having plans prepared for erection of edifice; concrete stone; roof probably of red tile; auditorium, seating capacity 800; site 100 feet wide; cost \$25,000. (Recently mentioned.)

Rockville, Md.—Baptist Church having plans prepared by Edward H. Glidden, 16 St.



Paul street, Baltimore, Md., for edifice to cost \$14,000; 40x70 feet; brick and stone; ordinary construction; steam heat; bids to be opened April 1; C. H. Robertson, church treasurer. (Recently incorrectly noted.)

Thomasville, N. C.—Methodist church has awarded contract to A. W. Council, High Point, N. C., for erection of edifice; seating capacity of auditorium, about 1500; cost about \$20,000; Rev. Parker Holmes, pastor.

Van Buren, Ark.—Baptist congregation has had plans prepared by T. E. Basham for erection of edifice to cost about \$10,000. John T. Blevins has contract for concrete foundation.

Winchester, Ky.—Official board First Christian Church has reported that bids received for erection of edifice exceed estimates, and committee has been instructed to proceed with erection of building according to plans originally adopted; cost estimated at \$50,000; Rev. J. H. MacNeill, pastor. (Recently mentioned.)

### COURTHOUSES

Asheville, N. C.—David Getas & Sons, Knoxville, Tenn., have contract at about \$56,300 for erection of addition and improvement of U. S. postoffice and courthouse at Asheville; red pressed brick; red sandstone trimmings; appropriation \$65,000; Jas. Knox Taylor, Treasury Department, Washington, D. C., Supervising Architect. (Recently mentioned.)

Atlanta, Ga.—Charles McCave & Co., Philadelphia, Pa., are lowest bidders for construction, including plumbing, of superstructure of U. S. postoffice and courthouse. Ambrose B. Stannard of New York was contractor for foundation and base. (Mentioned in December.)

Fitzgerald, Ga.—Ben Hill county will vote February 27 on issuance of \$65,000 of bonds for erection of courthouse. Address County Commissioners. (Bonds defeated in election previously mentioned.)

Johnson City, Tenn.—City is holding erection of courthouse under advisement; no plans formulated; architect not selected; E. E. Ellsworth, recorder. (Recently mentioned.)

Springfield, Ga.—Effingham county will erect courthouse. Address County Commissioners.

### DWELLINGS

Americus, Ga.—S. L. Sills will erect two dwellings on site 120x200 feet.

Baltimore, Md.—Bancroft Park Co. awarded contract to Philip Watts, Pikeville, Md., for residence recently noted to be erected at Bancroft Park on Park Heights avenue; plans by Ellicott & Emmart, 1101-02 Union Trust Building, Baltimore, Md.; frame and stucco; steam heat; gas and electric lighting.

Baltimore, Md.—Ezra B. Steiger, 3317 Beech avenue No. 2, has site, 70x120 feet, on which to erect frame residence 2½ stories high.

Baltimore, Md.—Charles B. Burdette, Hoffman Building, will erect eight two-story dwellings, at a cost of \$18,000, on north side of Baltimore street; plans by Jacob F. Gerwig, 11 East Lexington street.

Bay St. Louis, Miss.—Trustees Catholic congregation are considering plans by architects of New Orleans, La.; Biloxi, Miss., and Mobile, Ala., for rebuilding rectory previously reported burned. Address The Pastor, Roman Catholic Church.

Birmingham, Ala.—Dr. A. M. Brown, 511 Fifth avenue, North, will erect \$6000 residence; plans have been prepared by W. A. Rayfield & Co., 1717½ third avenue, North; concrete blocks; oak finish interior; Spanish Renaissance style.

Birmingham, Ala.—John G. Bradley will erect residence at a cost of \$15,000.

Birmingham, Ala.—George M. McLaughlin will erect residence; brown stone; front veranda; 65x14 feet; cost \$20,000; construction begun.

Columbus, Ga.—Albert S. Dozier has had plans prepared by T. W. Smith & Co. for erection of two-story residence.

Columbus, Ga.—Mrs. Wes Laney has awarded contract to Cooper Lumber Co. for erection of two-story residence.

Memphis, Tenn.—Hudson & Mulkey have contract to erect residence for E. H. Crump; two stories; brick veneer; slate roof; hardwood finish; cost \$12,000; Jones & Furlinger, Porter Building, architects.

Memphis, Tenn.—Joseph Bartl & Son have contract to erect residence for Dave Halle according to plans by Jones & Furlinger, Porter Building; structure will be two stories; brick veneer; stone trimmings; tile roof; hardwood finish; cost \$12,000.

Meridian, Miss.—S. A. Neville will rebuild

residence recently reported burned; plans by B. Stuart; construction by day's work; brick; hot-water heating; combination lighting; cost \$15,000.

Norfolk, Va.—L. A. Watts, Ocean View, Va., will erect residence at Willoughby Bay.

Orange, Va.—C. A. Waugh has had plans prepared by W. W. Keenan for dwelling recently mentioned; brick veneer; 40x56 feet; steam heat; electric lighting; cost about \$5000; construction by day labor. (See "Machinery Wanted.")

Rock Hill, S. C.—Wymojo Yarn Mills awarded contract to J. J. Keller & Co. for construction of 42 cottages; two of five rooms, 30 of four rooms and 10 of three rooms. Contractors have not purchased materials and supplies. (See "Machinery Wanted.")

Stamford, Texas.—E. A. Swenson will erect residence recently reported; plans by W. H. Symonds, 23 West 24th street, New York; mission style; hot-water heating; electric lighting; cost about \$8000; bids to be opened about February 18.

Vicksburg, Miss.—Patrick Henry will erect residence.

Wadesboro, N. C.—W. L. Marshall has awarded contract to Hunter & Vaughan, Charlotte, N. C., for erection of residence to cost about \$5000.

Washington, D. C.—James W. Heaney (Heaney & Loellier), Bladensburg road, will erect one-story brick dwelling at 1534 New Jersey avenue N. W., to cost about \$4000; Julius Germuller, 456 Louisiana avenue N. W., architect; E. D. DeLacy, contractor.

Washington, D. C.—William S. Minnix, Kellogg Building, 1416 F street N. W., is planning to erect six colonial dwellings, each having frontage of 24 feet, at 11th and Fairmont streets N. W.

Washington, D. C.—Mrs. Alexander Stewart has awarded contract to George A. Fuller Company, Munsey Building, for erection of residence according to plan by Bruce Price & De Sibour, 1135 Broadway, New York.

Wharton, Texas.—Baptist congregation will erect parsonage. Address The Pastor, Baptist Church.

### HOTELS

Camden, Ark.—R. H. Terrell and J. M. Goodgame, recently noted to erect hotel on site of burned Ouchita Hotel, have not yet engaged architect; building will be of mill construction; 97x170 feet; steam heat; electric lighting; cost \$32,000 to \$35,000; bids to be opened March 15.

Clearwater, Fla.—C. W. Baxter will erect tourist hotel.

El Paso, Texas.—Reported that St. Louis capitalists are considering plans for hotel to be erected for J. W. Fisher.

Hamlet, N. C.—E. A. Lackey will erect 35-room hotel.

MacDonald, W. Va.—Alex. McNabb and others will erect four-story frame hotel; plans by New York architect; ordinary construction; 135x66 feet; steam heat; electric lighting; hand elevator; cost, including furniture, \$20,000; bids to be opened March 1.

San Antonio, Texas.—Reported that N. R. Bagley, New York city, and T. A. Vance, Oklahoma City, Okla., have purchased 2209 acres of the Terrell pasture near San Antonio at \$125,000 and contemplate erection of hotel and sanitarium to cost about \$500,000.

Shelby, N. C.—Reported that A. C. Miller and associates are organizing company to purchase the Cleveland Springs and erect hotel and sanitarium.

### MISCELLANEOUS STRUCTURES

Anniston, Ala.—Business Building.—H. H. Cobb will erect one-story building, 60x35 feet; contract awarded.

Asheville, N. C.—Clubhouse.—Reported that Asheville Country Club will erect clubhouse to cost about \$12,000; J. J. McCloskey, promoter.

Baltimore, Md.—Library.—Medical and Chirurgical Faculty of Maryland, M. C. Noyes, librarian, 847 Hamilton terrace, has secured site on Cathedral street on which to erect proposed library and public-health institute. Building committee expects to secure a fund of \$100,000 and Legislature has been petitioned to appropriate \$100,000, making total cost of structure \$200,000.

Baltimore, Md.—Store Building.—Safe Deposit & Trust Co., 13 South street, awarded contract to John E. Marshall & Son, 121 Mercer street, for rebuilding of structure at 325 Baltimore street, recently reported burned; flooring, roofing, electric wiring, steam heating, etc.; cost \$7000.

Baltimore, Md.—Store Buildings.—Safe Deposit & Trust Co., 13 South street, awarded contract to Thomas B. Stansfield & Son, 109

Clay street, for erection of store buildings at 4 and 6 North Howard street; one story; 46x57 feet; brick; plans by Mottu & White, Professional Building.

Baltimore, Md.—Masonic Temple.—Masonic Lodge, Charles, near Saratoga street, will erect seven-story building to replace temple recently reported burned at a loss of \$150,000. It is understood that Joseph E. Sperry, Calvert Building, will be architect, and John Hiltz & Sons, 3 Clay street, builders.

Bay St. Louis, Miss.—Convent.—Trustees Catholic congregation are considering plans for rebuilding convent previously reported burned. Address The Pastor, Catholic Church.

Beaumont, Texas.—Business Building.—Texas Trading Co. awarded contract to W. C. Whitney for erection of proposed business building; plans by F. W. Steinman; 60x120 feet; elevator; cost \$8500.

Big Stone Gap, Va.—Business Building.—Jemima Willis will rebuild business building recently burned; 30x100 feet; brick; electric lighting; cost \$7000 to \$8000; to be occupied by J. M. Willis & Co. (See "Machinery Wanted.")

Brunswick, Ga.—Jail.—Glynn county will erect jail building, plans for which may be prepared by Edwards, Walter & Parham, Atlanta, Ga.

Charlotte, N. C.—Sanatorium.—Acme Plumbing Co. has contract for plumbing in the Charlotte sanatorium; contract price, exclusive of steam heating, \$10,000. J. W. Haas has contract for reinforced work, including steel partitions, concrete walls and floors; Rock Hill Brick Co., Rock Hill, S. C., has contract at about \$15,000 to furnish about 600,000 common brick; total cost of building about \$100,000; Frank P. Milburn & Co., Home Life Building, Washington, D. C., architects. (Mentioned in November.)

Corpus Christi, Texas.—Business Building.—Noakes Bros. have had plans prepared by R. L. Pierce, San Antonio, Texas, for erection of business building; two stories; brick and stone.

El Paso, Texas.—Business Building.—Trost & Trost have prepared plans for building; two stories and basement; stone and brick; 125 feet frontage.

El Paso, Texas.—Business Building.—Reported that St. Louis capitalists will erect business building according to plans by Trost & Trost.

Fitzgerald, Ga.—Jail.—Ben Hill county will vote February 27 on issuance of \$15,000 of bonds for erection of jail. Address County Commissioners. (Bonds defeated in election previously reported.)

Louisville, Ky.—Store Building.—Dr. T. D. Burgess, Matewan, W. Va., will erect business building; three stories; concrete blocks; 27x80 feet.

Memphis, Tenn.—Y. M. C. A. Building.—Young Men's Christian Association will open bids about March 14 for erection of building recently mentioned and described; plans by J. Galsford, 478 Randolph Building; seven stories; 90x149 feet; fireproof; steam and fan heating; electric-lighting plant; electric elevator; cost \$162,000.

Mobile, Ala.—Lodge Building.—Scottish Rite Cathedral Corporation, Robert L. Douglass, president, is having plans prepared for erection of building; four stories and basement; fireproof; cost about \$75,000.

Natatoches, La.—Store Building.—J. Ernest Breda has awarded contract to W. O. Scott for erection of two-story mercantile building to cost about \$10,000.

Norfolk, Va.—Store Building.—C. C. Cobb will erect four-story brick store building.

North, S. C.—Store Building.—E. C. Johnson will erect department-store building; estimated cost \$12,500. (See "Machinery Wanted.")

Oklahoma City.—Lodge Building.—Oklahoma City Lodge of Elks will have plans prepared by G. W. Van Meter and G. W. Collington for erection of lodge building; \$50,000 of bonds will be issued; R. H. Drennan, president.

Pensacola, Fla.—Government Building.—Sealed proposals will be received at office of James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C., until March 16 for quarters and hospital buildings at Santa Rosa Quarantine Station, Pensacola, Fla., in accordance with drawings and specifications to be obtained, at discretion, from Supervising Architect's office or office of medical officer in command, Pensacola, Fla.

Petersburg, Va.—Store Building.—A. W. W. Bryan & Sons have contract to rebuild Budd Furniture Co.'s store building; four stories; brick; entire front of iron and plate glass.

Richmond, Va.—Memorial Building.—Confederate National Association contemplates erecting building to cost about \$100,000; no definite action yet taken; site not chosen; president, J. Taylor Ellyson.

Roanoke, Va.—Car Barns.—Roanoke Railway & Light Co. will erect car barns.

Searcy, Ark.—Business Building.—Robbins & Sanford will erect building recently mentioned; two story; 100x110 feet; electric lighting; freight elevators; cost \$8000 to \$10,000.

Shelby, N. C.—Sanatorium.—Reported that A. C. Miller and associates will erect sanatorium. (See "Hotels.")

Statesville, N. C.—Store Building.—L. C. Wagner, R. V. Brawley and W. W. Cooper are having plans prepared by Hook & Rogers, Trust Building, Charlotte, N. C., for erection of store building; four rooms; one story.

St. Louis, Mo.—Business Building.—Edward Butler will not at present erect buildings on site recently reported purchased.

St. Louis, Mo.—Lodge Building.—Chicago and St. Louis capitalists, promoted by H. A. Vrooman (president State Trust Co.) have had plans prepared by Eames & Young for erection of Buyers' Club Building; 28 stories; cost \$1,500,000; cost with site, \$2,500,000.

St. Louis, Mo.—St. Louis Public Library Board will have plans prepared by Eames & Young, Wright Building, for erection of branch library building to cost about \$80,000; James F. Lee, chairman building committee. (Recently mentioned.)

Tylertown, Miss.—Store Building.—J. Yarbrough & Bro. are having plans prepared for erection of store building.

Washington, D. C.—Hospital.—Georgetown University Hospital, 25th and N streets, N. W., will erect addition; 20x60 feet; cost \$5,000. Committee on administration consists of Drs. Joseph T. Johnson, William T. Vaughan and others.

Washington, D. C.—John Barrett, director of Bureau of American Republics, acting for commission in charge, has invited following contractors to submit bids for erection of proposed building: George A. Fuller Company, Munsey Building; Richardson & Burgess Company, Colorado Building; James L. Parsons, 13½ street and Pennsylvania avenue N. W.; Newman & Smith, Colorado Building, all of Washington; Noel Construction Co., U. S. Fidelity & Guaranty Building, and Wells Bros., Union Trust Building, both of Baltimore, Md.; J. E. & A. L. Pennock, Land Title Building, Philadelphia, Pa.; Thompson-Starrett Company, 51 Wall street; J. Stewart & Co., North American Trust Building; J. C. Vreeland & Co., 1 Madison avenue; Tidewater Building Co., 25 West 26th street, and Norcross Bros. Company, 160 Fifth avenue, all of New York city. Total cost of building will be about \$1,000,000, \$250,000 being available for purchase of site and \$750,000 for structure. Prof. Paul P. Cret, University of Pennsylvania, and Albert Kelsey of Kennedy & Kelsey, 331 Chestnut street, associate architects, both of Philadelphia, Pa., are preparing plans and specifications, which are expected to be ready within 10 days. Bids will be opened within next month, and work will probably begin within 30 days.

### MUNICIPAL BUILDINGS

Beaumont, Texas.—Wharf.—City will build wharf at foot of Pearl street. Address The Mayor.

Beaumont, Texas.—Market, etc.—City Council invites competitive plans and specifications until March 1 for erection of brick or stone market-house, cost not to exceed \$20,000; also for construction of three brick or stone fire-station houses, total cost not to exceed \$20,000. Address J. G. Sutton, City Secretary; usual rights reserved.

Danville, Va.—Jail.—J. O. Magruder has prepared plans for enlargement and improvement of jail, providing for brick, addition 40x70 feet, with basement to contain boiler for heating purposes, laundry, kitchen, etc.; 12 cells, three tiers high, sufficient for accommodating 72 persons.

Petersburg, Va.—Jail.—City will reconstruct jail. Plans and specifications are being prepared by W. L. Carneal, architect, and J. A. Johnston, engineer, Room 203 Bank of Richmond Building, Richmond, Va.

### RAILWAY STATIONS

Houston, Texas.—Missouri, Kansas & Texas Railway. J. W. Petheram, chief engineer, Dallas, Texas, will not at present erect extension and make other improvements recently reported.

Lynchburg, Va.—Southern Railway, D. W. Lum, chief engineer, Washington, D. C., is

reported as considering erection of passenger station at Lynchburg.

Roanoke, Va.—Norfolk & Western Railway, C. S. Churchill, chief engineer, will erect freight depot.

Stamford, Texas.—Texas Central Railroad, C. Hamilton, vice-president and general manager, Waco, Texas, and Wichita Valley Railway, D. B. Keeler, vice-president, Fort Worth, Texas, will build joint passenger station recently mentioned; architect not yet engaged.

Woodward, Okla.—Atchison, Topeka & Santa Fe Railway, C. A. Morse, Topeka, Kan., chief engineer, will erect depot in Woodward to cost about \$15,000.

### SCHOOLS

Afton, Okla.—City contemplates voting bonds for erection of school building to cost \$25,000. Address The Mayor.

Aquilla, Texas.—City will vote on issuance of \$12,000 of bonds for erection of school building. Address The Mayor.

Auburn, Ala.—Alabama Polytechnic Institute, Charles C. Thatch, president, has adopted plans by N. C. Curtis, professor of architecture, for erection of agricultural building to cost about \$60,000. W. F. Feagin, secretary of building committee, has been instructed to advertise for bids for erection of Carnegie Library building, for which plans by Mr. Curtis were adopted in October. Structure will be two stories, 76x50 feet, equipped with exhaust-steam heating plant and electric lighting, and cost about \$35,000. Committee has also arranged to proceed with equipment of engineering and veterinary building with heating, lighting and gas fixtures; approved plans to equip pharmaceutical laboratory, consisting of two floors in annex to general chemistry building, and outlined details for construction of main sewerage system in connection with dining hall now in course of erection. Legislature has appropriated \$56,000 for four years for the various improvements now being undertaken. (Referred to in October and previously.)

Bay Minette, Ala.—Alabama Industrial College has secured 80 acres of land and will erect school buildings; Dr. L. A. Le Master, president.

Estherwood, La.—P. B. Lewis will not open bids until February 25 for furnishing material and constructing school building recently mentioned; plans and specifications on file at office of Mr. Lewis, at Estherwood, or of R. A. Nockton, architect, Crowley, La.

Payetteville, Ark.—School Board has adopted plans by H. L. Hewitt, Peoria, Ill., for erection of school building to cost about \$25,000.

Florala, Ala.—City is arranging for erection of school building, for which \$10,000 of bonds have been voted. R. A. French, Mayor.

Hope, Ark.—J. S. Pugh, Texarkana, Ark., has contract at \$22,720 for erection of school building at Hope; two stories and basement; brick; 12 rooms and auditorium.

Koeltztown, Mo.—School Board has had plans prepared by Wessbecher & Hellebrandt, Temple Building, St. Louis, Mo., for erection of school building; two stories; brick and stone; cost \$15,000.

Livingson, Texas.—School Board has conditionally accepted plans by J. S. Glover & Son, Houston, Texas, for erection of brick school building; cost about \$19,000.

Marksville, La.—Bids will be opened March 9 for erection of two-story and basement brick school building for parish of Avoyelles, according to plans and specifications on file at office of Favrot & Livaudais, Limited, architects, 839 Gravier street, New Orleans, La.; certified check \$500, payable to parish of Avoyelles; usual rights reserved; bids to be addressed to V. L. Roy, Superintendent of Education.

Natchez, Miss.—School Board will erect four ward school buildings at a cost of \$80,000.

Richmond, Va.—High School Building, contract for which was recently noted awarded to A. C. Bedford, will be four-story structure; 208x190 feet; hot-water heating, with ventilating system; electric and gas lighting; electric elevators; electric clocks; cost \$346,963.

Richmond, Va.—Union Theological Seminary has had plans prepared by Charles K. Bryant for erection of refectory building; three stories and basement; red pressed brick; stone and terra-cotta trimmings; dining hall to accommodate 100 students; steam heat; electric lighting; cost \$40,000; W. W. Moore, president. (Mentioned in January.)

Stamford, Texas.—Trustees Stamford In-

dependent School District, R. R. Greenwood, secretary, will open bids February 20 for erection of brick and stone school building to cost about \$20,000. Plans and specifications on file in office of Brazelton Pryor Company, Stamford and Waco, Texas. Usual rights reserved.

St. Louis, Mo.—Wall Bros. are lowest bidders at \$161,627 for erection of Walnut Park school building; fireproof; steam-plenum heating system; electric lighting; plans by William B. Ittner, architect, Commissioner of School Buildings. (Recently mentioned.)

Sulphur, Okla.—City will vote on issuance of \$50,000 of bonds for erection of school building. Address The Mayor.

Tampa, Fla.—Board of Public Instruction will open bids February 17 for erection of brick school building; plans and specifications on file in office of Shaw & Jay, architects, 108 Lafayette street; usual rights reserved.

Walnut Springs, Texas.—Tom Massey, secretary School Board, will open bids February 14 for erection of brick school building; certified check for \$300, payable to Mr. Massey; usual rights reserved. Plans and specifications on file in office of Mr. Massey at Walnut Springs or of C. H. Page, Jr., & Bro., architects, Austin, Texas.

Wheeling, W. Va.—School Commissioners will rebuild Union school building recently burned at a loss of \$39,000.

### THEATERS

Birmingham, Ala.—Lyric Amusement Co. incorporated with \$10,000 capital stock by J. W. Bradley, Ben F. Barbour and James N. Hamrick; has secured and will remodel building; seating capacity 300; Harry Wheelock, architect.

Houston, Texas.—Houston Theater Co. (H. T. D. Wilson and H. Prince) is reported as having adopted plans by H. C. Cooke & Co. for erection of theater; six stories, 150x62 feet; fireproof. (Mentioned in January.)

Winchester, Ky.—Winchester Auditorium Co. incorporated with \$20,000 capital stock by R. P. Scobee, R. S. Scobee and D. B. Scobee.

### WAREHOUSES

Ashland, Ala.—Union Warehouse Co. incorporated by P. E. Bass, J. M. Blanks, T. M. Shadix and others.

Baltimore, Md.—Charles T. King & Co., Charles and German streets, have purchased site 22x66 feet at 107 Chesapeake street, on which to erect four-story warehouse. Plans have been completed and estimates secured.

Baltimore, Md.—Frederick Neeseman, 618 Hanover street, awarded contract to F. Condon, 1823 West Saratoga street, for erection of warehouse recently mentioned; plans by J. H. King, 524 North Stricker street; 34x60 feet; gas and electric lighting; electric elevator (contracted for); cost within \$4500.

Hagerstown, Md.—Solomon George and associates will erect three-story warehouse 50x105 feet. (See "Woodworking Plants.")

### RAILROAD CONSTRUCTION RAILWAYS

Augusta, Ga.—The Atlanta & Carolina Construction Co., which is to build an electric railway from Atlanta to Augusta, has been granted a franchise in the latter city. M. Mason is chief engineer at Atlanta, Ga.

Baltimore, Md.—The Washington, Baltimore & Annapolis Railway Co. has completed and put in service that part of its line between Annapolis, Md., and Washington, D. C., about 37 miles.

Baton Rouge, La.—The Baton Rouge, Hammond & Eastern Railroad is reported to have completed tracklaying between Baton Rouge and Hammond, La., and as soon as ballasting is finished the line will be opened, probably about March 1. Grading is being continued toward Covington, La.

Buckhannon, W. Va.—The West Virginia Connecting Railroad Co. is reported to be obtaining right of way for its proposed line from Buckhannon, W. Va., to Waynesburg, Pa. J. V. Thompson of Uniontown, Pa., and D. F. Maroney of Pittsburgh are interested. Construction may begin this year.

Chattanooga, Tenn.—C. H. Fiske of Detroit, Mich., promoter of the proposed Nashville & Chattanooga Short Line, is reported as saying that details are being worked out preparatory to construction. The right of way is settled.

Chipley, Fla.—W. M. Gordon, president of right of way is secured for the proposed ex-Bay Railway, is reported as saying that right of way is secured for the proposed extension northward from Chipley, Fla., to

Enterprise, Ala., 60 miles, but surveys are not yet made.

Dallas, Texas.—The Dallas Interurban Electric Railway Co., 219 Commerce street, which is to build a line, has elected officers, as follows: Henry Dorsey, president; I. J. Willingham, first vice-president; Robert Ralston, second vice-president; M. H. Wolfe, third vice-president; S. A. Stemmons, secretary; W. W. Caruth, treasurer; W. H. Clark and W. T. Henry, general counsel.

Elkins, W. Va.—The Elkins Electric Railroad Co., which has applied for a franchise at Belington, has built its line in Elkins and is now being graded at a point about two miles out; grading will be pushed all winter as weather permits; survey has been completed to Harding.

Enid, Okla.—George W. Bear has, it is reported, been granted a 50-year franchise for an electric railway from Enid to Blackwell, Okla.

Fort Worth, Texas.—The Fort Worth, Weatherford & Mineral Wells Interurban Construction Co. is reported organized to build the proposed line of electric railway from Fort Worth to Mineral Wells, Texas, via Weatherford, and construction may be completed this year. G. M. Bowle of Weatherford is president; J. T. Hill of Mineral Wells, secretary. Others interested are Stuart Harrison and J. P. Spencer of Fort Worth, Charles McFarland of Weatherford, Cicero Smith of Mineral Wells and associates.

Fort Worth, Texas.—Concerning the increase of capital stock of the Trinity & Brazos Valley Railway, an officer of the company advises the Manufacturers' Record that it is not now contemplated to build any branches or extensions this year.

Hereford, Texas.—The Manufacturers' Record is informed that C. N. Wilson, president of the American Engineering Co. of Indianapolis, Ind., will inspect the proposed route of the Panhandle Short Line Railway with a view to financing and building it. As heretofore stated, the line is to run from Dalhart, Texas, via Hereford and other points, to Midland, Texas. W. G. Ross of Hereford, Texas, is president.

Johnson City, Tenn.—The South & Western Railway is reported to have sold bonds for continuing construction, and the work is to be rushed with the coming of milder weather. M. J. Caples is chief engineer at Johnson City.

Kirbyville, Texas.—The Jasper & Eastern Railway (Santa Fe system) is to hold a meeting on March 10 to consider plans to issue \$1,000,000 of bonds for additional improvements and equipment. C. F. W. Felt is chief engineer at Galveston, Texas.

Lakewood, Fla.—The Britton Lumber Co. is reported to be building an extension of its railroad to Westville, Fla. W. H. Britton, chief owner, and others are interested.

Laurel, Miss.—The Wausau Southern Lumber Co. of Wausau, Wis., will, it is reported, build a branch railroad from its plant at Laurel, Miss., to a connection with the Alabama & Mississippi Railroad through its property. J. M. T. Hamilton of Meridian, Miss., can probably give information.

Lenoir, N. C.—Mr. J. R. Ervin, consulting engineer, informs the Manufacturers' Record that the survey from Edmont to the top of the Blue Ridge, in Watauga county, is for the Watauga Railroad Co., which, after organizing in March, will likely have location made and may begin construction this year. The company is already chartered.

Louisburg, Tenn.—The Montgomery Lumber Co. is reported to be surveying for a railroad from Louisville via Bunn to a point near Springhope.

Madison, Tenn.—The Louisville & Nashville Railroad proposes to build three miles of revised line between Madison and Goodlettsville to reduce grades and curves. W. H. Courtenay if chief engineer at Louisville, Ky.

Maryville, Tenn.—Tracklaying is reported begun on the Southern Railway's extension from Maryville toward Bushnell, N. C. R. B. Oliver of Knoxville is the contractor.

McAlester, Okla.—Col. William Busby, it is reported, has purchased control of the Choctaw Interurban Railway from McAlester to Hartsborne, Okla., 16 miles, including the McAlester electric-light plant. Improvements may be made.

Middlesboro, Ky.—The Hignite Coal Co. is reported to have given a contract to M. S. Callison and Shelby Gibson for building a spur railroad about two miles long from a connection with the Louisville & Nashville Railroad, about two miles up Hignite creek.

Mineral Wells, Texas.—Reported that the Weatherford, Mineral Wells & Northwestern Railway (Texas Pacific system) is obtaining right of way for a proposed extension to

Aspermont. B. S. Wathen is chief engineer at Dallas, Texas.

Monroe, La.—The Arkansas, Louisiana & Gulf Railroad is reported to have opened three miles more of line to Woods, La., 12 miles from Monroe.

Moultrie, Ga.—The Georgia, Alabama & Western Railroad is expected to begin construction soon on its proposed line from Moultrie to Camilla, Newton, Elmore, Milford, Arlington, Bluffton and Fort Gaines; survey is just completed. The Kaufman-Shaw Construction Co. is promoter; address, Newton, Ga.

Morehead, Ky.—An officer of the Morehead & North Fork Railroad is quoted as saying that tracklaying is to begin March 1 from Paragon to Craney Creek, Ky., five miles, and location surveys have been made from Craney Creek via Redwine to Cox's schoolhouse. Grading is under way by the Snyder Construction Co.; maximum grade 1 per cent. S. L. Chiles, Jr., of Morehead, Ky., is engineer.

Oklahoma City, Okla.—The Chesapeake & Atlantic Transportation Co. of Oklahoma City, capital \$125,000, has been incorporated by J. P. Hurst and Capt. George E. Jones of Norfolk, Va., and E. L. McKeown of Guthrie, Okla.

Paris, Ark.—The Paris-Subiaco Traction Co., capital \$60,000, has been chartered to build a line five miles long from Paris, Ark., to Subiaco, where the monastery and college of the Benedictine Order is located. D. J. Young, Conrad Elksen, G. G. Daudridge, Henry Stroup and Charles J. Jewett are the incorporators. Mr. Young's address is Fort Smith, Ark.; Mr. Stroup's is Paris, Ark.

Princeton, W. Va.—Right of way is reported secured for the proposed electric railway from Princeton to Athens. R. G. Meador and others are interested.

Quitman, Ga.—The Quitman, Thomasville & Valdosta Electric Street Railway & Power Co. has been granted a franchise to run through Quitman, and it is said that construction will begin this year.

Reisterstown, Md.—A bill has been introduced in the Legislature to incorporate the Baltimore & Pennsylvania Railroad Co. to build either a steam or an electric railway from Baltimore via Reisterstown and Hampstead, Md., to Hanover, Pa.; capital \$250,000. The incorporators are William Massenheimer, Charles J. Wells, Jesse A. Davis, Henry M. Foster and C. Dickerson Day.

Rockport, Mo.—Reported that practically all funds necessary to build the proposed Rockport, Landon & Northern Railroad from Rockport, Mo., to Shenandoah, Iowa, have been subscribed, and construction will begin with good weather. Woodford M. Davis, R. B. Beeler and Albert B. Duncan of St. Joseph, Mo., and Harry Taylor, Patrick J. White and Edward S. Roemer of St. Louis are interested.

Roosevelt, Okla.—George R. Ray, president of the Oklahoma Mineral Belt Railroad Co., is reported as saying that construction contracts will probably be let about June 1 for the line, which is to run from Memphis, Tenn., to Hope, Ark., with branches to El Reno and Ardmore, Okla. Capital is reported secured. Total length of line, 650 miles.

Roxie, Miss.—The Mississippi Central Railroad is reported to be pushing construction on its line between Roxie and Meadville, Miss., 14 miles, contract having been let.

Silverton, Texas.—Eugene C. Gordon of Amarillo, Texas, has, it is reported, proposed to build a railroad to Silverton, and is seeking a bonus of \$50,000.

Stamford, Texas.—An inspection has just been made of the route for the proposed Stamford & Northwestern Railroad, and Mr. E. P. Swenson is reported as saying that the line will be built, but he did not announce the date for beginning construction. A permanent survey has been made from Stamford to a point in Dickens county. Others interested are E. H. Northrup, F. S. Hastings, Eric A. Swenson and W. T. Andrews of Stamford.

Sugarland, Texas.—The Imperial Valley Railway will, it is reported, resume construction immediately on the proposed line from Imperial to Hemphstead, Texas. J. G. Acton is superintendent at Sugarland, Texas, and L. G. Beadle is chief engineer at Lake City, Texas.

Timpson, Texas.—President W. G. Ragley of the Timpson & Northwestern Railroad is reported as saying that he expects to begin construction within a month or two on the proposed extension from Long Branch to Henderson, Texas, 14 miles.

Tupelo, Okla.—Clarence Walters is reported to have finished the survey of the Missouri, Oklahoma & Gulf Railroad as far as Tupelo.



Waynesville, N. C.—Col. S. A. Jones informs the Manufacturers' Record that the financial arrangements for the proposed transcontinental electric railway are progressing nicely, and within 30 days actual grading will begin at Waynesville.

### STREET RAILWAYS

Ardmore, Okla.—The Manufacturers' Record is informed that the report saying that J. L. Robertson, 6 East Lexington street, Baltimore, had been awarded contract for work on the Ardmore Traction Co.'s line is erroneous. He has nothing to do with the enterprise.

Louisville, Ky.—The Louisville Traction Co. contemplates extending the Oak-street line and also building a line to the new State fair grounds.

Minden, La.—Franchise is reported granted to H. A. Davis and J. B. Story for the Minden Traction Co. to build and operate either an electric railway or a gasoline motor-car line.

San Angelo, Texas.—J. H. Ransom of Hereford, Texas, has arrived in San Angelo to build his proposed electric street railway.

Shreveport, La.—John Lorenz of Jackson, Miss., is reported to have begun construction on his proposed electric railway from a connection with the Highland Park line of the Shreveport Traction Co. of Centenary College.

### MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Art Glass.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on art glass for \$18,000 church building.

Bath Fixtures.—Chas. Waugh, Unionville, Va., wants bath fixtures; porcelain.

Blasting Material.—Bids will be received at office of H. F. Hodges, General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until February 27 for blasting material, including dynamite, powder, exploders, detonators, fuse, wire, etc. Blanks and general information relating to Circular No. 424 obtainable from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal.; and 410 Chamber of Commerce Building, Tacoma, Wash.; also from U. S. Engineer Office in following cities: Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville and Mobile.

Boiler.—Ronda Coop & Egg Case Co., Ronda, N. C., wants prices on 25-horse-power second-hand return-flue boiler.

Bottlers' Supplies.—Coca-Cola Bottling & Candy Co., Beaumont, Texas, wants bottlers' supplies, including crown and spring stopper and bottling tables.

Brick.—Chas. Waugh, Unionville, Va., wants brick.

Brick Machinery.—L. S. Baker, Roseboro, N. C., wants prices on brick machinery.

Brick Machinery.—B. L. Johnson, Ronda, N. C., wants prices on second-hand brick machines; capacity 25,000 to 50,000 daily.

Bridge Construction.—Board of Public Affairs, W. L. Toney, chairman, Pine Bluff, Ark., will open bids February 17 for construction of concrete culvert across ravine on East Second avenue; plans and specifications on file in office of City Engineer; usual rights reserved; W. A. Lee, Clerk.

Building Materials.—E. C. Johnson, North, S. C., will want building materials for \$12,500 department-store building.

Building Materials.—Drs. W. H. Lee & Son, Conyers, Ga., want prices on building materials, including sash, doors, blinds, brick and lumber.

Building Materials.—J. J. Keller & Co., Rock Hill, S. C., want prices on building

materials and supplies for operatives' cottages and cotton-mill building. (Recently mentioned.)

Building Materials.—Chas. Hoertz & Son, 18 Porter Block, Grand Rapids, Mich., wants prices on brick, lumber, glass, hardware, paint, iron, stone, plaster cement, gravel, shop work, metal work, slate, wiring, heating and plumbing for Government building at Ocala, Fla.

Building Materials.—J. M. Willis & Co., Big Stone Gap, Va., will want brick, lime, iron front and doors.

Building Stone.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on building stone.

Candy Supplies.—Coca-Cola Bottling & Candy Co., Beaumont, Texas, in market for candy supplies.

Canning Equipment.—S. S. Ogletree, Eufaula Truckers' Association, Eufaula, Ala., wants to correspond with manufacturers of canning machinery.

Carpenters' Tools.—S. T. Birtner, Tobaccoville, N. C., wants carpenters' tools.

Cement.—Chas. Hoertz & Son, 18 Porter Block, Grand Rapids, Mich., wants prices on cement.

City Engineer's Supplies.—Board of Public Works, Charleston, S. C., will receive bids until February 17 for following work and supplies for one year: Iron castings, bricks, lime, Portland cement and Rosendale cement, three-inch plank and other rough lumber, long-leaf pine, etc.; bluestone, granite or Gneiss curbing, terra-cotta glazed pipe (8, 10, 12, 15, 18, 24-inch), also Ts and Ys, street brooms and handles, shovels, pitchforks and handles, concrete sidewalks, laying terra-cotta pipe, setting stone curbing, setting flags, hauling terra-cotta pipe of sizes above stated and hauling stone curbing, etc. Specifications and information furnished at office of board. J. H. Dingle, City Engineer.

Coat Hangers.—Cochrane Showcase Co., Charlotte, N. C., wants prices from manufacturers on coat and garment hangers.

Cotton Tape.—A. H. Masters, Box 384, Greensboro, N. C., wants addresses of manufacturers of ladder tape; used in manufacturing venetian blinds.

Doors.—See "Building Materials."

Doors.—Chas. Waugh, Unionville, Va., wants doors for \$5000 residence.

Dryhouse.—Cumberland Beverage & Ice Co., Barboursville, Ky., wants dryhouse.

Electric Motor.—Coca-Cola Bottling & Candy Co., Beaumont, Texas, wants electric motor.

Electric Motors.—West Virginia Paper Products Co., Parkersburg, W. Va., wants prices on one horse-power and one-half horse-power electric motors.

Electric Motors.—Bids will be received at office of John T. Hume, treasurer, Southern Branch N. H. D. V. S., National Soldiers' Home, Va., until March 12 for furnishing all material and labor for installing two electric motors, one in main laundry and one in bakery, according to instructions and specifications, copies of which, with other information, obtained on application to Mr. Hume.

Electrical Equipment.—C. L. Robinson, Charles Town Ice Plant, Charles Town, W. Va., wants electrical equipment.

Elevator.—B. H. Sprankle, 422 Union avenue, Knoxville, Tenn., will buy passenger elevator.

Engine.—Ronda Coop & Egg Case Co., Ronda, N. C., wants prices on 20-horse-power center-crank engine.

Engine.—Siegel Manufacturing Co., Boyle and Old Manchester road, St. Louis, Mo., wants Corliss engine. (See "Ice Machinery.")

Engine.—City of Urbana, Va., will want bids on gasoline engine for water-works. Address The Mayor.

Engineering Appliances.—Associated Engineers and Constructors' Society of Tidewater, Va., Box 184, Norfolk, Va., wants catalogues of engineering appliances from manufacturers, for reference files.

Filter.—Cumberland Beverage & Ice Co., Barboursville, Ky., wants filter.

Flooring.—Chas. Waugh, Unionville, Va., wants flooring for \$5000 residence.

Gasoline Engine.—See "Irrigation Plant."

Handle Machinery.—See "Woodworking Machinery."

Heating Plant.—C. A. Waugh, Unionville, Va., wants steam-heating plant.

Heating Plant.—E. C. Johnson, North, S. C., will want heating plant for \$12,500 store building.

Heating Plant.—Chas. Hoertz & Son, 18 Porter Block, Grand Rapids, Mich., wants

prices on heating plant for Government building at Ocala, Fla.

Ice Machinery.—Siegel Manufacturing Co., Boyle and Old Manchester road, St. Louis, Mo., in market for 35-ton ice machine; second-hand; directly connected to Corliss engine preferred.

Ice Plant.—W. N. Owen, secretary Board of Trade, Conway, Ark., wants estimates on 10-ton ice plant, including buildings and machinery.

Iron Front.—J. M. Willis & Co., Big Stone Gap, Va., will want iron front for \$8000 business building. (See "Building Materials.")

Iron Fronts.—Drs. W. H. Lee & Son, Conyers, Ga., want prices on iron fronts for two-story business building (suitable for plate glass).

Irrigation Plant.—K. B. Harvey, Punta Gorda, Fla., wants small gasoline irrigating plant.

Knitting Machinery.—L. H. Stone, Ozone, Tenn., wants information and prices on machinery for knitting hosiery and underwear.

Lathe.—Fort Smith Well Drill Manufacturing Co., Fort Smith, Ark., will want second-hand lathe.

Lighting.—E. C. Johnson, North, S. C., will want lighting for \$12,500 store building.

Lamps.—See "Lighting Apparatus."

Laundry Machinery.—Cumberland Beverage & Ice Co., Barboursville, Ky., wants two medium-size washers, 72-inch mangle, 22-inch extractor, dryhouse, starch tank, filter, shafting, pulleys, etc.

Lighting Apparatus.—E. L. Spangler, Lurich, Va., wants to correspond with manufacturers of gasoline or incandescent lamps relative to taking agency for large territory.

Lime.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on lime.

Lumber.—C. A. Sprinkle, Tobaccoville, N. C., wants prices on lumber.

Machinery.—Associated Engineers and Constructors' Society of Tidewater, Va., Box 184, Norfolk, Va., wants catalogues of machinery from manufacturers, for reference files.

Machine Tools.—See "Lathe" and "Power Hammer."

Manufactures.—G. L. Bussanick & Co., Piazzadella Borsa 3, Trieste, Austria, want to represent American manufacturers; they invite samples, prices and discounts.

Mantels.—Chas. Waugh, Unionville, Va., wants cabinet mantels for \$5000 residence.

Metal Work.—See "Building Materials."

Miscellaneous Supplies.—Bids will be received at office of H. F. Hodges, general purchasing officer, Isthmian Canal Commission, Washington, D. C., until March 9 for blank books, index cards, paper file boxes, neostyle and mimeograph supplies, etc. Blanks and general information relating to Circular No. 425 obtainable from above office or offices of assistant purchasing agents, 24 State street, New York; Custom-house, New Orleans; 1086 North Point street, San Francisco, Cal.; and 410 Chamber of Commerce Building, Tacoma, Wash.; also from U. S. Engineer office in following cities: Los Angeles, Cal.; Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, St. Paul, Detroit, Milwaukee, Chicago, St. Louis, Chattanooga, Louisville and Mobile.

Naval Supplies.—Bids will be received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until February 11 to furnish at Navy-yard, Norfolk, Va., quantity of brass hinges and ditty box locks. Applications should refer to Schedule 754. Blank proposals furnished on application to navy pay office, Norfolk, Va., or to bureau; E. B. Rogers, Paymaster-General, U. S. N.

Piping.—H. M. Sinsott & Co., Birmingham, Ala., wants manufacturer's agency for steel and corrugated iron culvert piping.

Planing-mill Machinery.—S. T. Birtner, Tobaccoville, N. C., wants planing-mill machinery.

Plumbing.—See "Building Materials."

Polishing Machinery.—United Electric Light & Power Co., 520 West 24th street, New York city, wants information concerning machinery and supplies for polishing electrical instruments, jewels and pivots.

Power Hammer.—Fort Smith Well Drill Manufacturing Co., Fort Smith, Ark., will want second-hand power hammer.

Pressed Brick.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on pressed brick.

Pulleys, Shafting, etc.—Cumberland Beverage & Ice Co., Barboursville, Ky., wants pulleys, shafting, etc.

Pump.—Rhode Island Co., Spray, N. C.,

wants new or second-hand rotary pump, direct connected to alternating or direct-current motor; 30 gallons per minute capacity; 50 feet elevation; 400 feet distance.

Pump.—G. E. Stockwell, 453 Travis street, Beaumont, Texas, wants second-hand 24-inch double-suction centrifugal pump; state how long used and if for water or mud.

Pump.—C. L. Robinson, Charles Town Ice Plant, Charles Town, W. Va., wants deep-well pump.

Pump.—R. V. Nolan, Superintendent Water and Light, Fernandina, Fla., wants information and prices on water pump of 2,000,000 gallons' capacity for fire pressure.

Pumping Machinery.—See "Irrigation Plant."

Rivet-manufacturing Plant.—Thomas L. Barrett, care of Donigan & Barrett, Board of Trade Building, Louisville, Ky., wants information relative to establishment of rivet-manufacturing plant, cost of machinery, etc.

Road Machinery.—H. C. MacNair, Board of Road Supervisors, Maxton, N. C., in market for roadbuilding machinery, including wheel scrapers, road ditchers, etc.

Road Machinery.—J. T. Bullen, county engineer, Montgomery, Ala., may want seven-ton roller; horse, steam or motor power.

Road Roller.—Bids will be received in office Board of Revenue of Jefferson county, John T. Reed, president, Birmingham, Ala., until February 15 for furnishing 10-ton steam road roller; usual rights reserved.

Roadway Construction.—Bids will be received at Depot Quartermaster's office, Washington, D. C., until March 5 for resurfacing roadways on Antietam battlefield, according to specifications on file at above office or of superintendent of battlefield; United States reserves usual rights. Major M. Gray Zaluski, Quartermaster, U. S. Army, Washington, D. C.

Roofing.—J. M. Willis & Co., Big Stone Gap, Va., will want roofing.

Roofing.—P. G. Millen, Dade City, Fla., wants prices on galvanized corrugated roofing.

Roofing.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on slate roofing.

Sand Finish.—Chas. Waugh, Unionville, Va., wants sand finish for brick.

Sash.—See "Building Materials."

Seating.—Gaston W. Ward, chairman building committee, Greensboro, N. C., wants prices on pews for \$18,000 church edifice.

Sewer Construction.—Commissioners of Sewerage, Equitable Building, Louisville, Ky., are inviting bids for construction of sewer under recent \$1,000,000 bond issue, known as section B of southern outfall sewer contract No. 2 of comprehensive system of sewerage; plans and specifications on file at office of Commissioners of Sewerage; P. L. Atherton, chairman, and Charles P. Weaver, secretary-treasurer.

Sewer Construction.—City Commissioners, Galveston, Texas, will receive bids until February 13 at office of City Secretary for construction of following vitrified sewers: Constructing proposed sewer extension in area north of alley between Avenue P<sup>1</sup>/<sub>2</sub> and Q and east of center line of 36th street; approximate quantities as follows: 8196 linear feet 8-inch pipe, 6386 linear feet 10-inch pipe, 1551 linear feet 12-inch pipe, 1330 linear feet 18-inch pipe, 49 regular manholes, 546 Y branches, 17,453 linear feet 36-inch running board. Constructing complete proposed sewer laterals on Avenue Q from east line of 25th street to bulkhead at the south side of grade raising canal at point about 80 feet east of east line of 23d street; approximate quantities as follows: 1200 linear feet 12-inch pipe, together with all manholes, Y branches and other appurtenances as shown on plans. Work to be done in accordance with plans and specifications prepared by City Engineer and on file in his office. Certified check, payable to order of president of Board of City Commissioners, in sum of 5 per cent. of amount of bid. Bond in sum of 50 per cent. of amount of contract. Proposals must be submitted separately for constructing complete either of proposed extensions as above stated; usual rights reserved; H. C. Lange, Commissioner of Water-works and Sewerage; A. T. Dickey, City Engineer; John D. Kelley, City Secretary.

Sewer Construction.—Bids will be received at office of Commissioners, District of Columbia, Washington, D. C., until March 2 for construction of sewers in District of Columbia. Forms, specifications and information obtained at Room 43, District Building. Henry B. F. MacFarland, Henry L. West and Jay J. Morrow, Commissioners, D. C.

Sewer Piping.—Bids will be received at office of Commissioners of District of Co-

lumbia, Washington, D. C., until February 25 for furnishing terra-cotta sewer pipe. Specifications, blank forms, etc., may be obtained at office of Property Clerk, District of Columbia, District Building. Henry B. F. MacFarland, Henry L. West and Jay J. Morrow, Commissioners, D. C.

Shingle Machine.—L. S. Baker, Roseboro, N. C., wants prices on shingle machine.

Slate.—See "Building Materials."

Store Fixtures.—J. M. Willis & Co., Big Stone Gap, Va., will want shelving and counters.

Strawboard.—Edgar & Nantz, McKensie, Tenn., want carloads of strawboard for manufacturing fillers for egg cases.

Telephone Equipment.—Climax Telephone Co., John C. Shelhouse, secretary, Whittle Depot, Va., will need from 4000 to 6000 pounds wire and 20 to 30 telephones.

Tools.—See "Carpenters' Tools."

Water-works.—City of Urbanna, Va., will receive bids on water-works system, consisting of 15,000-gallon tank on 50-foot tower, gasoline engine for pumping, four-inch mains and about 15 fire plugs. Address The Mayor.

Water-works.—City of Childress, Texas, will open bids March 3 for construction of water-works, according to plans and specifications on file in office of Joseph H. Aynesworth, City Secretary, or of Eureka Fire Hose Co., Dallas, Texas; certified check \$300;

copy of plans and specifications \$5; usual rights reserved.

Whistle.—Spray Woolen Mills Co., Spray, N. C., wants new or second-hand eight-inch chime whistle for high-pressure boiler.

Wiring.—See "Building Materials."

Wiring Machinery.—West Virginia Paper Products Co., Parkersburg, W. Va., wants combination machine for fastening staples and wire handles on oyster buckets.

Wood Screws.—Standard School Desk Manufacturing Co., Box 484, Columbus, Ga., wants addresses of manufacturers of wood screws; buy in 500 and 1000-pound lots.

Woodworking Machinery.—Ronda Coop Co., Ronda, N. C., in market for small 12 or 16-inch surfacing planer, second-hand.

Woodworking Machinery.—A. H. Powell, Oxford, N. C., wants prices on machinery for making broom, plow, shovel and hoe handles.

Woodworking Machinery.—L. S. Baker, Roseboro, N. C., wants prices on four-sided eight-inch moulder; new or second-hand; also wants shingle machine.

Woodworking Machinery.—Woodruff Planing Mill Co., Cadiz, Ky., wants to correspond with manufacturers of woodworking machinery, with view to placing order for special patented machine for marking four sides at once (at any angle), such articles as wagon tongues, staves, joists or other tapering work.

the United States were present, and engaged in a general discussion of the business affairs of the company. As a suitable ending of the convention a banquet was given to the managers at the Union League Club on Friday evening, January 31. The convention was pronounced a decided success by all present.

#### R. S. McMichael, Manufacturers' Representative.

R. S. Michael announces that he has established offices at 409 and 410 Woodward Building, Birmingham, Ala., in the interest of three of the best-known machinery manufacturers of the country. He will represent the Morgan Engineering Co., Alliance, Ohio, maker of cranes, steam hammers, rolling-mill and other heavy machinery; the Wilson-Snyder Manufacturing Co., Pittsburg, Pa., builder of pumping machinery, and the I. P. Morris Company, Philadelphia, Pa., manufacturer of centrifugal pumping machinery and water turbines.

#### Important Contracts of Southern Foundry.

A number of important contracts have been filled recently by the Davis Foundry and Machine Works of Rome, Ga. They included improved horizontal cylinder gate turbine water-wheels and other equipment for the Paulding County Electric Co.'s plant at Dallas, Ga., these wheels to develop about 500 horse-power, and they are enclosed in steel flumes mounted on I beams. The power is to be used for furnishing electricity to drive the textile machinery of the Paulding County Cotton Manufacturing Co.'s mill and furnishing lighting in Dallas. The electricity will be transmitted six miles. This contract is evidence that Southern manufacturers can supply water-power-electrical equipments for lighting and manufacturing plants.

#### The G. Drouve Company.

The G. Drouve Company of Bridgeport, Conn., at its annual meeting of directors on February 3, elected G. Drouve president and treasurer and William V. Dee secretary. Mr. Dee, who recently resigned from the Railway Age to take an interest in the company, has been appointed general sales manager. The company manufactures the Anti-Pluvius skylight (of which 125,000 square feet has been installed on the Hoboken terminal of the Delaware, Lackawanna & Western Railroad) and the Lovell window-operating device (now used in the shops of the New York Central & Hudson River Railroad Co., Harmon, N. Y., the Delaware, Lackawanna & Western Railroad Co., Scranton, Pa., and a number of others), the Drouve ventilator, drying stove, etc.

#### That Fire at Roebing's.

Referring to the fire at its plant last week, the John A. Roebing's Sons Company of Trenton, N. J., says: "On February 5 one of our rope shops was destroyed. This was one of the several wire-rope shops at our works and was of minor importance. Owing to the fact that business in general has been somewhat depressed and that at this season of the year the demand for wire rope is always less than during the spring and summer months, the facilities of our rope shops have not been overtaxed, and the productive capacity of our remaining shops will enable us to continue prompt shipments. We shall immediately begin to rebuild the shop which was destroyed, and anticipate no trouble whatever in fully meeting the present trade demand for wire rope and in being in a position, through additional facilities, to meet the increase which will naturally come within a short time."

#### Interesting Cold Water Paint Experiment.

An interesting experiment with cold-water paint was recently made by the Roebing Construction Co. on some of its work in a building on East 49th street, New York. It had always been found troublesome to use such paint over iron work left exposed by this system of construction, because the iron would rust through the paint and stain it badly. The difficulty was taken up with a number of water-paint manufacturers and samples of their products tested, and entire satisfaction was found in using Permanite. Permanite covered splendidly, dried out a pure, brilliant white, completely killed the rust stains and proved so firm that it could not be removed with a sponge and water. It also proved inexpensive, one pound covering about 25 square feet of terra-cotta block and iron one coat, and costing about five cents. This paint is specified for all such work, and substituted, indeed, for whitewash and oil paint whenever possible. Another feature is that it is said to be absolutely fireproof. Permanite is manufactured by Messrs. M. Ewing Fox & Co., 136th street and Rider avenue, New York.

## TRADE LITERATURE.

### Carthage Superior Limestone.

The Carthage Superior Limestone Co. of Carthage, Mo., is now distributing crushed and ground limestone quotation sheet No. 10. This became effective January 29 and supersedes all previous quotations. Purchasers of limestone for any purpose will find it to their advantage to write the company for literature descriptive of its products.

### Soil Pipe and Fittings.

Dealers in and users of cast-iron soilpipe and fittings will find comprehensive data regarding such products in the booklet price-list issued by the High Point Pipe & Foundry Co. of High Point, N. C. This company has a complete modern plant for manufacturing pipe and fittings, its brand of which has found favor throughout the country among buyers and contractors. Messrs. Elchel & Co. of Richmond, Va., are general sales agents for the company.

### Taylor's Spiral Riveted Pipe.

Those who require pipe and supplies will be interested to know that the American Spiral Pipe Works of Chicago, Ill., has issued its new 20-page circular showing some of the varied uses and many of the advantages of Taylor's spiral riveted pipe and forged-steel flanges. The circular also calls attention to the company's large cast-iron fittings and special sheet-iron fittings, steel pipe couplings, etc. It is known as Circular No. 21 M.R.

### "Two in One" Hoisting Drum.

The Hayward Company, 97 to 103 Cedar street, New York, is distributing an illustrated leaflet which tells of a few applications of the "Two in One" hoisting drum. This publication is illustrated and refers to several classes of machines, but by no means does it contain a complete series of cuts showing all the uses to which the drum may be put. All who have an interest in hoisting equipment of the latest approved design should write the Hayward Company for particulars of the device mentioned.

### Jenkins Bros. Gate Valves.

Messrs. Jenkins Bros. of 71 John street, New York, have issued a supplement to their 1907 catalogue. This publication supersedes pages 70 and 71 of the catalogue, and refers to the extra heavy gate valves for 250 pounds working pressure and the medium-pressure gate valves for 150 pounds working pressure. These valves are very heavy, and are suitable for extra high pressure and temperature steam and water service. They are especially adapted to meet the requirements of modern high-pressure power plants.

### Some Portland Cement Information.

Timely information regarding Portland cement is presented in the February number of the series of illustrated pamphlets which the Universal Portland Cement Co. has been issuing. It includes illustrations of some important buildings and construction work on which the company's brand of cement was used. The Universal plants at Chicago and Pittsburg have a daily output of 17,000 barrels of cement, and the company has offices in both cities. Chicago offices in the Commercial Bank Building; Pittsburg offices in the Frick Building.

### Woodhouse Chain Literature.

All who use or deal in chains for industrial purposes should have for reference the new Woodhouse chain literature, which tells of the welded-link chains made by the Woodhouse Chain Works. This company offers a complete line of standard types of chains for cranes and dredges, for ships, hoisting purposes and other uses in which chains are demanded every day. Its literature presents comprehensive data as to the method of making Woodhouse chains and tells what they are capable of doing both as to efficiency and economy. The Woodhouse Chain Works, Wm. Woodhouse, proprietor, is located at Trenton, N. J.

### Electrical Tool Literature.

The extensive adoption of electricity for power and lighting purposes in all lines of industry has created an imperative demand for portable electric tools. This situation has been readily recognized by American manufacturers, and they have been prominent in meeting the needs of the users of such tools. The Chicago Pneumatic Tool Co., long known for the success of its portable tools operated by compressed air, turned its attention to electric tools about three years ago, and it has been eminently successful in this direction. At present the company is issuing several bulletins which give important information regarding its elec-

## INDUSTRIAL NEWS OF INTEREST

### Wants Lamp Agency.

E. L. Spangler, Lurich, Va., wants the agency for a gasoline or incandescent lamp, and is prepared to contract for a large territory.

### Want Culvert Piping Agency.

Messrs. Sinnott & Co. of Birmingham, Ala., want to correspond with manufacturers of steel and corrugated iron culvert piping, relative to taking agency.

### Purchased a Newton Cupola.

The Sioux City (Iowa) Foundry & Manufacturing Co. has installed a five-ton Newton cupola furnished by the Northern Engineering Works of Detroit, Mich.

### Place Order After Tests.

After a series of tests lasting over nine months, the Harlan & Hollingsworth Corporation of Wilmington, Del., have placed a large order with the Electric Cable Co. of 17 Battery Place, New York, for the anti-corrosive compound Voltax.

### Panama Brick Contract Awarded.

Another contract for supplies to be used in the construction of the Panama canal has been awarded to a Southern manufacturer. It is for 50,000 bricks, and they will be furnished by the Salmen Brick & Lumber Co. of New Orleans, La.

### An Opportunity for Manufacturers.

Manufacturers needing facilities in the South are advised that a two-story brick factory building and equipment of machinery at Savannah is offered for sale. The property includes electrical equipment, machinery for high-class woodwork, drykiln and stables. For further information address I. D. La Roche, 21 Bay street East, Savannah, Ga.

### A Standard Oil Co. Contract.

After a competitive test of Southern and Eastern-built ice machines, the engineers of the Standard Oil Co. have awarded contract to the Southern company for two 100-ton ice machines. These machines will be furnished by the Henry Vogt Machine Co. of Louisville, Ky., and it is understood that several more contracts will also be given to that company.

### Sullivan Machinery Co.

The Sullivan Machinery Co., Railway Exchange Building, Chicago, Ill., announces that George M. Bertram, for several years connected with the company, is appointed local manager of its Joplin (Mo.) branch office, succeeding Randolph D. Talmage. The company bespeaks for Mr. Bertram the same courtesy from patrons and friends which has been accorded in the past to its other representatives.

### To Close European Contracts.

Owing to several important contracts pending with shipyards and other industries in Europe, J. V. Duntley, president of the Chicago Pneumatic Tool Co. of Chicago, sailed from New York for Europe on the 4th inst. on the steamship Kaiser Wilhelm II for a four or five weeks' trip. Before sailing Mr. Duntley stated that while the volume of business transacted by the American com-

pany was not satisfactory, yet January had shown considerable improvement over December.

### Machinery and Stock Sale.

On February 20 a public sale will be held of the machinery and stock of Messrs. Nathan H. Hirschberg & Sons, Bayard and Carroll streets, Baltimore. The machinery includes devices used in making picture mouldings, frames, etc., and the stock includes mouldings, frames, mirrors, engravings, etc. For information address the Grotjan-Lobe Company, 223 West Baltimore street, Baltimore, Md.

### Mr. Henry L. W. Hyde.

Messrs. Hyde Bros. & Co. of Pittsburg, Pa., announce the death, on January 23, at Pinehurst, N. C., of Henry L. W. Hyde, senior partner of the firm, secretary of the Whitney Company and treasurer of the Clearfield Steel & Iron Co. Mr. Hyde was well and widely known in the industrial world because of his connection with and the success with which he assisted in the management of the several enterprises referred to.

### Carloads of Emerson Pumps.

An emphatic indication of recognition of the merits of the Emerson pumps is seen in the statement of the manufacturer that it received an order last week from its Chicago representative (G. H. Olmstead, offices in the Fisher Building) for a full carload of the pumps. Mr. Fisher also stated he would require another carload in about six weeks. These pumps are manufactured by the Emerson Steam Pump Co., Prince street and Strand, Alexandria, Va.

### Water-Works Investment Opportunity.

The holder of a water-works franchise from a Maryland city offers an opportunity for investment in his enterprise. The franchise runs for 40 years and specifies number of fire plugs for city's use, besides which a local railway agrees to consume 2,000,000 gallons monthly. Prompt correspondence is necessary, as construction must begin by March 1 in order to retain franchise. For details address No. 250, care of the Manufacturers' Record.

### The Weber Subterranean Pump.

Those who are concerned in the use of pumps which effect their purpose and at a minimum expense will find it advantageous to investigate the Weber subterranean pump. This equipment is offered as delivering water from deep wells to an ordinary height and at any distance at an extremely low cost. It may be stated that the cost of lifting 1000 gallons 100 feet is given as one cent. This is an indication of the possibilities of the Weber pump. The Geo. H. Sampson Company, 13 Pearl street, Boston, Mass., manufactures this pump.

### Convention of Johns-Manville Branch Managers.

In accordance with usual custom, the H. W. Johns-Manville Company held in New York a convention of its branch managers from January 29 to February 1. The managers of the various branches throughout



tric portable drills, grinders, wood borers and other tools. The company's general offices are at 1010 Fisher Building, Chicago.

#### Wrought-Iron Pipe vs. Steel Pipe.

Metal piping has manifold uses, and there is an immense and steadily-increasing demand for it in all kinds of building and construction activity. Iron and steel pipe is being called for every day, and it is of interest for the consumer to be informed that an illustrated pamphlet now being distributed presents some pertinent information regarding the two materials and their actual accomplishments in regular use. The pamphlet is issued by the Reading Iron Co. of Reading, Pa., which for many years has been known as one of the most successful manufacturers of wrought-iron pipe. It presents the data in the form of a legal case of the wrought-iron pipe versus steel pipe, in the court of actual experience, with the pipe consumer as the judge, during the term 1886-1907. People interested in piping should write the company for a copy of the pamphlet.

#### The Standard Accumulator.

"A storage battery is merely a voltaic cell in which the chemical reactions which produce useful work can be reversed electrolytically. It is as if one could take a common dry cell when exhausted and, by sending a current through it backward, undo the chemical work and put the dissolved zinc back upon the zinc rod." With the foregoing as an introduction, an illustrated pamphlet now being distributed presents some important facts regarding the storage battery and then tells of the perfection attained in the manufacture of the Standard accumulator. This latter is the result of a decade of investigation having for its object the production of a battery having the very high weight efficiency of the Faure construction, combined with complete freedom from danger of buckling, bad contacts and disintegration. How this is accomplished is told concisely. The pamphlet is issued by the Standard Electric Accumulator Co. of 141 Broadway, New York.

#### Parsons Traction Trench Excavator.

The demand for labor-saving machinery for excavating trenches for sewers, water mains, gas mains, conduits, etc., is well known. Its realization during recent years has resulted in the invention of mechanical equipments which enable contractors and others engaged in trench digging to do that class of work with efficiency and economically. The Parsons traction trench excavator is one of the machines which has proven successful, and is in constant use today. The manufacturer is now distributing an illustrated pamphlet which describes the Parsons equipment, not in detail, but gives a general outline and tells the character of the work it will do and what it is accomplishing for present users. The Parsons machine is offered as fully adapted for the different kinds of ditch digging which contractors meet with throughout the United States. It is manufactured by the G. W. Parsons Company of Newton, Iowa, for which Geo. F. Lambert, 306 Observatory Building, Des Moines, Iowa, is sales agent.

#### Sand-Lime Bricks and Blocks.

During recent years users of bricks have given their attention to the production of sand-lime bricks, the manufacture of which has been most successful in Europe, the largest plant being one at Berlin, with a capacity of 280,000 bricks in 10 hours. Sand-lime bricks have uniform color, great crushing strength, and improve with age. They are sanitary, of low-heat conductivity, uniform, and are produced at a low cost. Prominent in the design and construction of the machinery used in making sand-lime bricks and blocks is the Ideal Brick Machinery Co. This company's illustrated catalogue is an interesting publication, presenting data as to the demand for sand-lime products, the history of the industry, the success of plants in various localities throughout the world and other particulars. It describes the Ideal equipments and tells of their superior features, which enable the manufacturer to produce the best quality of brick and blocks at a minimum cost. From the manufacturer's point of view sand-lime bricks made with Ideal machinery are especially interesting, because but 24 hours are required to complete the process, and all waste of material is prevented. The Ideal Brick Machinery Co. builds its equipments at Anderson, Ind., and the Eastern territory is given attention from that city. A. E. Westerfield, secretary of the company, is now establishing a Southern office at Dallas, Texas. He superintended the construction of plants in Pennsylvania, Virginia and elsewhere while he was stationed in charge of the New York offices, which he has left to locate in Dallas.

## FINANCIAL NEWS

### Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,  
Baltimore, Md., February 12.

The Baltimore stock market was dull during the week, and prices of speculative issues receded. In the trading United Railways common sold at 11 to 10 3/4; trust certificates, 11 to 10 1/2; do. incomes, 47 1/2 to 46 1/4; do. funding 5s, 74 1/2 to 73 3/4; do. scrip, 74 1/2 to 74; do. 4s, 86 3/4 to 86 1/4; Consolidated Gas 6s, 102 1/2; do. 5s, 107 1/2; Seaboard 4s, 50 to 47; Cotton Duck 5s, 72 1/2 to 72.

Bank stock sold as follows: Citizens', 32; Mechanics', 26; Maryland, 16; First National Bank of Catonsville, 115; Mercantile Trust, 110.

Other securities were traded in thus: Northern Central Railway stock, 84 1/2 to 83 1/2; Western Maryland, 5 to 4 7/8; Atlanta & Charlotte Extended 4 1/2s, 98 1/2; Atlantic Coast Line new 4s, certificates, 65 1/2 to 65; Baltimore City 3 1/2s, 1930, 96 to 95; do. do. 1980, 94; Georgia, Carolina & Northern 5s, ex-coupon, 90; Western North Carolina 6s, 102; West Virginia Central 6s, 102; Atlantic Coast Line Consolidated 4s, 87 1/2 to 87; Atlantic Coast Line of South Carolina 4s, 92; City & Suburban (Washington) 5s, 100; Georgia Southern & Florida 5s, 90 1/4; Omaha Water Co. Consolidated 5s, 1946, 65 1/2; Maryland & Pennsylvania incomes, 53; Pennsylvania Railroad Convertible 3 1/2s, 1915, 89 1/2; Omaha Gas First Consolidated 5s, 1917, 90; Virginia deferred Brown Bros. certificates, 25; Charleston & Western Carolina 5s, 101.

### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
February 12, 1908.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	64 1/2	65
Atlantic Coast Line of Conn.....	100	200	
Georgia Sou. & Fla. 1st Pfd.....	100	89	
Seaboard Company Common.....	100	4	6
United Railways & Elec. Co.....	50	10	10 1/2
Western Maryland.....	50	4 1/2	5
<b>Bank Stocks.</b>			
Citizens' National Bank.....	10	32	
Commer. & Far. White City.....	100	105	
Farmers & Mer. Nat. Bank.....	40	49 1/2	
Maryland National Bank.....	20	15	17 1/2
Merchants' National Bank.....	100	100	
National Bank of Baltimore.....	100	110	
National Exchange Bank.....	100	161 1/2	
National Howard Bank.....	10	12	12 1/2
National Marine Bank.....	30	38	
National Union Bank of Md.....	100	115	
Third National Bank.....	100	109 1/2	110

<b>Trust, Fidelity and Casualty Stocks.</b>			
Fidelity & Deposit.....	50	112	118
Mercantile Trust & Deposit.....	50		112

<b>Miscellaneous Stocks.</b>			
Ala. Con. Coal & Iron Pfd.....	100		75
Con. Gas, Elec. Lt. & P. Com.....	100	19	
Consolidation Coal.....	100		90
G. B. S. Brewing Co.....	100	2	2 1/2
Georges Creek Coal.....	100		75
Mer. & Miners' Trans. Co.....	100		70

<b>Railroad Bonds.</b>			
Albany & Northern 5s, 1946.....	92		
Atlanta & Charlotte Ext. 4 1/2s.....	96	100	
Atlantic Coast Line 1st 4s, 1952.....	86 1/2	87	
Atlantic Coast Line 4s, Cfsa, 1952.....	64 1/2	65	
Atlan. Coast Line (S. C.) 4s, 1948.....	92		
Carolina Central 4s, 1949.....	75	80	
Charleston & West. Car. 5s, 1946.....	101 1/2		
Char., Col. & Aug. 1st 5s, 1910.....	98	100	
Columbia & Greenville 1st 5s, 1916.....	102	107	
Georgia & Alabama 5s, 1945.....	85	90	
Georgia, Car. & North. 1st 5s, 1929.....	89	90 1/2	
Georgia Pacific 1st 5s, 1925.....	104	110	
Georgia Sou. & Fla. 1st 5s, 1945.....	95	99 1/2	
Piedmont & Cum. 1st 5s, 1911.....	95		
Potomac Valley 1st 5s, 1941.....	104	105 1/2	
Raleigh & Augusta 1st 5s, 1926.....	95		
Savannah, Fla. & West. 5s, 1934.....	102 1/2		
Seaboard Air Line 4s, 1950.....	46 1/2	48	
Seaboard Air Line 5s, 10-year, 1911.....	80	85	
Seaboard & Roanoke 5s, 1926.....	90	98	
Virginia Midland 5th 5s, 1926.....	97 1/2		
Western Maryland 4s, 1952.....	56	60	
Western Maryland 2d 4s.....	56	60	
Western N. C. Con. 6s, 1914.....	102	103	
West Virginia Central 1st 6s, 1911.....	101	103	
Wilmington, Col. & Aug. 6s, 1910.....	102		
Wilmington & Wel. Gold 5s, 1935.....	106		

<b>Street Railway Bonds.</b>			
Anacostia & Potomac 5s, 1949.....	97	100	
Atlanta Con. Street Rwy. 5s.....	100		
Baltimore City Pass. 5s, 1911.....	101		
Balto., Sp. Pt. & Ches. 4 1/2s.....	92		
Baltimore Traction 1st 5s, 1929.....	106 1/2		
Cent. Rwy. Con. 5s (Balt.), 1932.....	107		
Charleston City Rwy. 5s, 1923.....	100		
City & Suburban 5s (Wash.), 1948.....	98	101	
Knoxville Traction 1st 5s, 1928.....	99 1/2	102 1/2	
Lake Roland Elevated 5s, 1942.....	108 1/2		
Lexington Railway 1st 5s, 1949.....	90		
Macon Rwy. & Lt. 1st Con. 5s, 1953.....	85	95	
Metropolitan 5s (Wash.), 1925.....	104 1/2		
Newport News & Old Point 5s, 1938.....	75		
Norfolk & Portsmouth Traction 5s.....	90		
Norfolk St. Rwy. 5s, 1944.....	101 1/2		
North Baltimore 5s, 1942.....	108 1/2		
Rimond Traction 5s.....	101		
United Railways 1st 4s, 1949.....	86	86 1/2	
United Railways Inc. 4s, 1949.....	46 1/4	47	
United Railways Funding 5s.....	73	73 1/2	

<b>Miscellaneous Bonds.</b>			
Atlanta Gas 1st 5s, 1947.....	95		
Baltimore Electric 5s.....	78		
Consolidated Gas 6s, 1910.....	102 1/2		
Consolidated Gas 5s, 1939.....	107 1/2	107 1/2	
Consolidated Gas 4 1/2s.....	87	87 1/2	
Con. Gas, Elec. Lt. & Power 4 1/2s.....	70 1/2	72	
G. B. S. Brewing 1st 5s.....	37 1/2	40	
G. B. S. Brewing 2d Incomes.....	11	14	
Maryland Telephone 5s.....	90		

Mt. Vernon-Woodby's Cot. Duck 5s.....	71 1/2	73 1/2
United Elec. Lt. & Power 4 1/2s.....	80	85

### SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh Mac-  
Rae & Co., Wilmington, N. C., for  
Week Ending February 8.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	58	
Alken Mfg. Co. (S. C.).....	90	
American Spinning Co. (S. C.).....	145	150
Anderson Cotton Mills (S. C.).....	113	
Arkwright Mills (S. C.).....	105	110
Augusta Factory (Ga.).....	65	70
Avondale Mills (Ala.).....	100	110
Belton Mills (S. C.).....	115	121
Bibb Mfg. Co. (Ga.).....	113 1/2	
Brandon Cotton Mills (S. C.).....	130	
Cabarrus Cotton Mills (N. C.).....	125	130
Chadwick Mfg. Co. (N. C.) Pfd.....	130	
Chiquola Mfg. Co. (S. C.).....	123 1/2	
Clifton Mfg. Co. (S. C.).....	105	116
Clifton Mfg. Co. (S. C.) Pfd.....	98 1/2	100
Clinton Cotton Mills (S. C.).....	150	
Columbus Mfg. Co. (Ga.).....	94	
Courtenay Mfg. Co. (S. C.).....	97 1/2	
Dallas Mfg. Co. (Ala.).....	95	
Darlington Mfg. Co. (S. C.).....	78	83 1/2
East & Phenix Mills (Ga.).....	125	137 1/2
Easley Cotton Mills (S. C.).....	144	148
Enoree Mfg. Co. (S. C.).....	70	80
Enoree Mfg. Co. (S. C.) Pfd.....	100	
Enterprise Mfg. Co. (Ga.).....	85	90
Exposition Cotton Mills (Ga.).....	240	
Gaffney Mfg. Co. (S. C.).....	83	85
Gainesville Cotton Mills (Ga.).....	56	
Granby Cot. Mills (S. C.) 1st Pfd.....	45	52
Greenville Mfg. Co. (S. C.).....	100	
Greenwood Cotton Mills (S. C.).....	90	94
Grendel Mills (S. C.).....	115	118
Henrietta Mills (N. C.).....	161	175
King Mfg. Co., John P. (Ga.).....	98	
Lancaster Cotton Mills (S. C.).....	110	115
Lancaster Cot. Mills (S. C.) Pfd.....	91	95
Langley Mfg. Co. (S. C.).....	91	98
Laurens Cotton Mills (S. C.).....	140	150
Limestone Mills (S. C.).....	91	
Lockhart Mills (S. C.) Pfd.....	97	100
Louise Mills (N. C.).....	91	
Marlboro Cotton Mills (S. C.).....	81	85
Mayo Mills (S. C.).....	165	185
Mills Mfg. Co. (S. C.).....	110	
Mills Mfg. Co. (S. C.) Pfd.....	105	
Monaghan Mills (S. C.).....	105	
Monarch Cotton Mills (S. C.).....	105	
Newberry Cotton Mills (S. C.).....	150	
Norris Cotton Mills (S. C.).....	129	
Olympia Cot. Mills (S. C.) Pfd.....	68	70
Orangeburg Cot. Mills (S. C.) Pfd.....	80	88
Orr Cotton Mills (S. C.).....	104	105
Pacolet Mfg. Co. (S. C.).....	155	
Pacolet Mfg. Co. (S. C.) Pfd.....	95	97
Peiser Mfg. Co. (S. C.).....	170	
Piedmont Mfg. Co. (S. C.).....	165	174
Poe Mfg. Co. (S. C.).....	127 1/2	
Raleigh Cotton Mills (N. C.).....	102	105
Richland Cot. Mills (S. C.) Pfd.....	66	
Roanoke Mills (N. C.).....	140	155
Saxon Mills (S. C.).....	120	128
Sibley Mfg. Co. (Ga.).....	60	63
Spartan Mills (S. C.).....	140	145
Springdale Mills (S. C.).....	100	
Triton Mfg. Co. (Ga.).....	127 1/2	
Tucapau Mills (S. C.).....	195	
Union-Buffalo Mills (S. C.) 1st Pfd.....	67	70
Victor Mfg. Co. (S. C.).....	127 1/2	
Warren Mfg. Co. (S. C.).....	92	93 1/2
Warren Mfg. Co. (S. C.) Pfd.....	105	
Washington Mills (Va.).....	29	35
Washington Mills (Va.) Pfd.....	100	
Whitney Mfg. Co. (S. C.).....	120	125
Wicacasset Mills (S. C.).....	130	135
Woodruff Cotton Mills (S. C.).....	130	
Woodside Cotton Mills (S. C.).....	105	110

Quotations Furnished by William S.  
Glenn, Broker, Spartanburg, S. C.,  
for Week Ending February 10.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	80	90
Aetna Cotton Mills (S. C.) Pfd.....	80	
Alken Mfg. Co. (S. C.).....	83	89
American Spinning Co. (S. C.).....	145	
Anderson Cotton Mills (S. C.).....	75	
Arcadia Mills (S. C.).....	95	100
Arkwright Cotton Mills (S. C.).....	105	
Augusta Factory (Ga.).....	65	70
Avondale Mills (Ala.).....	110	
Belton Mills (S. C.).....	112	115
Brandon Mills (S. C.).....	125	130
Brogan Mills (S. C.).....	40	45
Cabarrus Cotton Mills (N. C.) Pfd.....	125	
Chadwick Mfg. Co. (N. C.) Pfd.....	125	
Chiquola Mfg. Co. (S. C.).....	115	125
Clifton Mfg. Co. (S. C.).....	105	110
Clifton Mfg. Co. (S. C.) Pfd.....	101	
Clinton Cotton Mills (S. C.).....	155	
Columbus Mfg. Co. (Ga.).....	94	
Courtenay Mfg. Co. (S. C.).....	100	
Dallas Mfg. Co. (S. C.).....	95	100
Darlington Mfg. Co. (S. C.).....	90	85
D. E. Converse Co. (S. C.).....	113	
Drayton Mills (S. C.).....	100	
East & Phenix Mills (Ga.).....	130	135
Easley Cotton Mills (S. C.).....	145	150
Enoree Mfg. Co. (S. C.).....	70	82
Enoree Mfg. Co. (S. C.) Pfd.....	100	103
Enterprise Mfg. Co. (Ga.).....	82	90
Exposition Cotton Mills (Ga.).....	225	
Gaffney Mfg. Co. (S. C.).....	80	85
Gainesville Cotton Mills (Ga.).....	67	60
Glenwood Mills (S. C.) Cotton.....	122	
Gluck Mills (S. C.).....	90	95
Granby Cot. Mills (S. C.) 1st Pfd.....	60	
Granvilleville Mfg. Co. (S. C.).....	180	185
Greenwood Cotton Mills (S. C.).....	90	94
Grendel Mills (S. C.).....	115	
Hartsville Cotton Mill (S. C.).....	125	
Henrietta Mills (N. C.).....	165	
Inman Mills (S. C.).....	100	102
King Mfg. Co., J. P. (Ga.).....	97	102
Lancaster Cotton Mills (S. C.).....	109	
Lancaster Cot. Mills (S. C.) Pfd.....	92	99
Langley Mfg. Co. (S. C.).....	92	96
Laurens Mills (S. C.).....	150	162
Limestone Mills (S. C.).....	140	150
Lockhart Mills (S. C.).....	87	92
Lockhart Mills (S. C.) Pfd.....	101	
Loray Cotton Mills (N. C.) Pfd.....	90	100
Marlboro Cotton Mills (S. C.).....	80	90
Mills Mfg. Co. (S. C.).....	110	
Mollobon Mfg. Co. (S. C.).....	100	110
Monaghan Mills (S. C.).....	112	
Monarch Cotton Mills (S. C.).....	98	
Newberry Cotton Mills (S. C.).....	127	
Ninety-Six Cotton Mills (S. C.).....	115	
Norris Cotton Mills (S. C.).....	117	122
Odell Mfg. Co. (N. C.).....	90	
Olympia Cotton Mills (S. C.).....	70	80
Orr Cotton Mills (S. C.).....	100	105

### Two Financial Books.

"The Investors' Primer," by John Moody, is a well-written reference book published by the Moody Corporation, 35 Nassau street, New York. The author says that he has endeavored to supply the demand for a concise handbook containing in simple language definitions of all the important terms and phrases employed in the investment and banking business. It endeavors to meet the requirements of those who are wholly ignorant of financial affairs, as well as to supply the needs of others who have a partial acquaintance with them. It will be found useful by almost anyone who has relations with the financial world. It is printed on good stock, and is bound in brown cloth.

"Mining Investments, and How to Judge Them," is another book from the same press, the author being Francis C. Nicholas, Ph. D., who seems to have given much thought to his subject in an effort to afford his readers information of value to enable them to accurately analyze mining propositions and to avoid being "stuck" by any that are unworthy. He points out the manifold dangers of mining investments, and tells how some frauds are committed, all this being to warn the inexperienced of the pitfalls which are in the way. Anyone who reads the book is better prepared to protect himself than he was before. It is well printed, and is bound in pearl-gray cloth.

### Electric Railways and Lights.

Stone & Webster, 147 Milk street, Boston, have issued their manual of electric railway and lighting properties for 1908, giving brief descriptions of the various properties under their management, together with summaries of the capital and earnings during the past year, besides particulars concerning the securities. The publication covers 31 corporations at various points from Nova Scotia to Texas and from the North Pacific coast to Florida and Porto Rico. The securities department of the firm acts for the companies in placing stocks and bonds with bankers and investors. The book is handsomely bound in morocco, with gilt lettering.

### New Corporations.

Argyle, Ga.—The Bank of Arg

W. S. Douglas, president; L. E. Sigmon, vice-president; John R. Craig, cashier; J. E. Craig, J. C. Shannon, S. B. Clowney and Jas. H. Craig.

Blanchard, Okla.—The First State Bank, capital \$15,000, has been authorized to commence business with J. Patterson, president; Charles Vincent, vice-president, and Dwight Manny, cashier.

Byars, Okla.—The American State Bank, capital \$10,000, has been authorized to begin business with F. B. Kibbe, president; J. W. Gillett, vice-president, and H. B. Reich, cashier.

Caddo, Okla.—The Bryan County State Bank has begun business. W. H. Ainsworth, W. H. Attaway and others are incorporators.

Clinton, Okla.—The Oklahoma State Bank, capital \$25,000, has organized with the following directors: O. A. Shuttle and G. W. Bellamy, El Reno; A. J. Aycock and J. L. Avant, Clinton.

Dialville, Texas.—The Dialville State Bank, capital \$15,000, has begun business with W. B. Cowan, president; C. D. Jarrett, vice-president, and J. D. Harris, cashier.

Forrest City, Ark.—The American Mortgage Co. of Edinburgh, Scotland, has filed articles of agreement and incorporation with the secretary of Arkansas. N. W. Norton is agent.

Hartshorne, Okla.—The First State Bank has been authorized to begin business with \$20,000 capital. C. S. Wingate is president; J. H. Baker, vice-president, and B. C. Sims, cashier.

Kings Mountain, N. C.—Reports state that the new bank being organized here will be chartered under the name of the Home Banking Co., instead of the People's Loan & Trust Co.

Memphis, Tenn.—The German Fire Insurance Co. of Tennessee has made application for a charter; capital \$130,000. The incorporators are George E. Neuhardt, K. D. McKeller, R. M. Henry, W. L. Wellford, T. B. Turley and J. D. Browne.

Milo, Mo.—The Bank of Milo has been incorporated with \$10,000 capital by W. M. Moore, Sam McGourney, E. M. Rhodes and others.

Mountain City, Tenn.—The Bank of Mountain City, capital \$15,000, opened for business January 15 with B. G. Wills, president; R. W. Jackson and R. S. McDade, vice-presidents; R. F. McDade, cashier, and C. C. Donnelly, assistant cashier.

Mt. Pelia, Tenn.—The Mt. Pelia Bank, with \$15,000 capital, has been incorporated by E. C. Jackson, H. D. Carlton, W. J. Avery, A. O. Parrish, G. L. Hansbrough, J. R. Penn, R. J. Penn, R. J. Jackson, J. B. Collier, J. E. Good and C. C. Cooper.

Muskogee, Okla.—The Muskogee National Bank, capital \$100,000, has organized with Augustus W. Patterson, president; Arthur C. Trumbo, vice-president and cashier; Jas. M. Stout and Fred Knowlton, assistant cashiers.

Newark, Ark.—The First National Bank of Newark, Ark., has been authorized to begin business with \$25,000 capital. C. M. Edwards is president; J. P. Magness, vice-president, and E. D. Chessier, cashier.

Savannah, Ga.—The People's Loan, Saving & Investment Co. has filed articles of incorporation; capital \$10,000. The incorporators are J. H. Williams, N. H. Whitmire, John Capers, J. S. Moody, Jacob Neal and W. F. Clements.

Stanton, Texas.—The Home National Bank, capital \$25,000, has been authorized to begin business with Charles Ebbesol, president; J. E. Garrett, cashier; A. C. Eidson, first vice-president; T. S. Crowder, second vice-president.

Sulphur, Okla.—The Park National Bank, which is a conversion of the Sul-

phur Bank & Trust Co., has organized with George F. Hicks, Paris, Texas, president; John R. Manning, Palmer, Okla., vice-president; J. C. Chidney, cashier, and T. F. Gafford, assistant cashier. The capital is \$25,000.

Thorsby, Ala.—The Thorsby Savings Bank has been incorporated with \$25,000 capital by M. J. Barrett, A. Horn, L. V. Stabler, H. I. Honeycutt, A. A. Jackson, Guy H. Gerald, I. S. Gerald, Samuel Kauffman, M. Kahn, Mrs. R. M. Weil and Mrs. J. Baum.

Timberville, Va.—A State bank is reported being organized with \$10,000 capital.

Tuttle, Okla.—The Bank of Tuttle, capital \$10,000, has been incorporated by George M. Meil, Louis Meder, Thomas Waldon, H. E. Green, George A. Hosey and C. H. Kaylor.

Union, S. C.—The Citizens' Real Estate & Loan Co., capital \$25,000, has elected the following directors: Davis Jeffries, president; J. M. Jeter, Jr., vice-president; D. Fant Gilliam, treasurer; E. M. Smith, W. F. Gilliam, J. Roy Fant, F. M. Farr, W. D. Arthur, R. B. Gilliam, C. W. Miller, B. F. Arthur, W. S. McLure, Thos. McNally, P. E. Fant and L. B. Jeter.

Union Bridge, Md.—The First National Bank has been approved; capital \$25,000. The organizers are Edw. F. Olmstead, Baltimore; Daniel Wolfe, John N. Weaver, E. A. C. Buckley, Jacob S. Gladhill and L. E. Stauffer. Business is expected to begin about April 10 with the following directors: Daniel Wolfe, president; John N. Weaver, vice-president, and Edward F. Olmstead, cashier; E. A. C. Buckley, Jacob S. Gladhill, L. E. Stauffer and John H. Repp of Union Bridge, E. O. Cash of Middleburg.

Walnut Ridge, Ark.—The Union Lumber, Land & Building Co., which proposes to loan money and assist in building homes, has organized with the following directors: T. J. Sharum, president; W. E. Belonte, secretary; C. W. White, treasurer; A. C. Herman, W. R. Lane, W. A. Henry and R. W. Barrick; capital \$100,000.

### New Securities.

Afton, Okla.—Steps are being taken, it is reported, to hold an election to vote bonds for water-works and sewerage system and an electric-light plant. It is also stated that in the near future efforts will be made to secure an issue of \$25,000 of school-building bonds.

Americus, Ga.—E. A. Hawkins, Mayor, is offering for sale \$75,000 of 4½ 30-year bonds for municipal improvements.

Aquilla, Texas.—An election is to be held to vote on \$12,000 of independent school district bonds.

Athens, Ga.—An election will soon be held to vote on \$50,000 of sewer bonds.

Collins, Miss.—An issue of \$4000 of water and light bonds has been ordered by the City Council.

Bakersville, N. C.—The Senate has passed a bill authorizing Mitchell county to issue bonds for improvements.

Birmingham, Ala.—A bill has been introduced in the City Council providing for an election to vote on \$3,000,000 of water-works bonds.

Charlottesville, Va.—A bill has been passed by the Senate authorizing Albemarle county to issue \$30,000 of bonds to pay floating debt, build new bridge and make other improvements.

Chestertown, Md.—The question of issuing \$50,000 of water-works bonds is reported under consideration.

Cornelia, Ga.—Bids for \$10,000 of 5 per cent. 30-year school bonds are now being received by J. W. Patton, Mayor.

Decatur, Ala.—On March 11 an election

is to be held in Morgan county to vote on \$200,000 of road bonds.

Fitzgerald, Ga.—An election is to be held in Ben Hill county February 27 to vote on \$65,000 of courthouse and \$15,000 of jail 5 per cent. 30-year bonds.

Gainesville, Ga.—The question of holding an election in Hall county to vote on \$150,000 of road-building bonds is reported under consideration.

Greensboro, Ga.—City Clerk J. H. McWhirter is receiving bids for \$15,000 of 6 per cent. 30-year school-building bonds.

Hattiesburg, Miss.—Bids will be received by Herbert Gillis, treasurer, until noon March 2 for \$40,000 of 5 per cent. 10-20-year Forrest county jail bonds.

Hereford, Texas.—Reports state that an election will soon be held to vote on bonds for sewerage system.

Houston, Texas.—It is reported that Harris county has under consideration the question of issuing bonds for new courthouse.

Huntsville, Ala.—The City Council has voted \$18,000 of 5 per cent. 10-year street-paving bonds. It is also stated that \$20,000 of electric-light-plant bonds will probably be issued.

Joplin, Mo.—The election called for February 10 to vote on \$25,000 of fire-station bonds has been postponed until February 25.

Kirkville, Mo.—The \$10,000 of 5 per cent. 5-20-year funding bonds have been purchased at par by Devitt, Trimble & Co. of Chicago.

Marietta, Okla.—On February 19 the district court will hold a special session to decide the question of issuing \$8000 of school bonds.

Maryville, Mo.—The H. P. Wright Investment Co. of St. Louis has been awarded at 100.125 and accrued interest \$35,000 of 4½ per cent. 5-10-year Nodaway county poorhouse building bonds.

Mayfield, Ky.—Reports state that \$70,000 of school bonds are to be issued.

Shawnee, Okla.—The election to vote on \$25,000 of school bonds is to be held April 6.

Montgomery, Ala.—An issue of \$46,500 of 6 per cent. 1-20-year paving bonds has been authorized.

Norton, Va.—An election is to be held, it is reported, to vote on \$20,000 of electric-light and \$20,000 of street and sidewalk bonds. The election called for February 18 to vote on sewer, street and jail bonds has been declared off.

North, S. C.—J. L. Reeves, City Clerk, is receiving bids for \$8000 of 5 per cent. 30-year school bonds.

Rutherford, N. C.—The Senate has passed a bill authorizing Rutherford county to issue bonds for courthouse.

Rutledge, Ga.—Offers are being received by G. W. Oxford, Mayor, for \$10,000 of 5 per cent. 30-year school bonds.

Spartanburg, S. C.—A bill has been introduced in the Legislature providing for an election August 25 to vote on \$250,000 of 4 per cent. 20-30-year Spartanburg county road and bridge bonds.

Spartanburg, S. C.—An election will probably be held June 2 to vote on \$230,000 of 4 per cent. 20-40-year bonds for the purpose of purchasing the plant of Home Water Supply Co.

Spring, Texas.—An issue of \$2000 of 5 per cent. 5-10-year independent school district bonds has been approved by the Attorney-General. The bonds were registered by the Attorney-General.

St. Petersburg, Fla.—The election held February 4 to vote on \$80,000 of municipal improvement bonds failed to carry.

Sulphur, Okla.—Arrangements are being made, it is reported, to hold an election to vote on \$50,000 of bonds for district high school.

Taylor, Texas.—Reports state that a

petition is to be filed with the City Council asking that an election be held April 2 to vote on \$15,000 of street and sidewalk improvement bonds.

Tulsa, Okla.—R. J. Edwards of Oklahoma City has been awarded at par \$30,000 of school and \$25,000 of sanitary sewer 5 per cent. 20-year bonds.

Waynesboro, Miss.—The city has voted \$12,000 of electric-light-plant bonds.

Webb City, Mo.—The First National Bank of Cleveland has purchased \$17,000 of 5 per cent. 5-20-year sewer bonds.

Webb City, Mo.—The City Council has under consideration \$14,000 of judgment bonds.

Urbanna, Va.—It is reported that steps are being taken to issue \$8000 of 30-year water-works bonds.

At Evergreen, Ala., bids will be received until noon March 2 for \$50,000 of 5 per cent. 30-year Conecuh county road-improvement bonds. Further particulars will be found in the advertising columns.

### Financial Notes.

Runnels county, Texas, is reported to have redeemed \$6000 of bonds.

The Bank of Red Oak, Okla., is reported to have increased its capital from \$5000 to \$10,000.

The People's Bank of Samson at Samson, Ala., is reported to have increased its capital from \$25,000 to \$50,000.

The conversion of the Bank of Kinston, N. C., into the National Bank of Kinston has been approved; capital \$100,000.

The First National Bank of Batesburg, S. C., has increased its capital from \$25,000 to \$50,000. W. W. Watson is president.

The Commercial Bank of Camden, S. C., has been converted into the First National Bank of Camden, with \$50,000 capital.

The conversion of the Bank of Leesville at Leesville, S. C., into the National Bank of Leesville with \$25,000 capital has been approved.

The Saline County Bank at Benton, Ark., is reported to have increased its capital from \$15,000 to \$30,000. John L. Hughes is president.

Reports state that the Farmers' Union of Birmingham, Ala., proposes to establish banks throughout Alabama for the accommodation of farmers. The largest bank is to be located at Birmingham.

The Whitesburg State Bank and the Citizens' Bank of Whitesburg, Ky., are reported to have consolidated under the title of the Union Bank of Whitesburg with \$35,000 capital. James P. Lewis is president.

The Bank of Commerce and the First National Bank, both at Dyersburg, Tenn., are reported to have consolidated under the name of the latter institution with \$100,000 capital; George E. Scott, president, and J. C. Doyle, cashier.

B. De Kalb McDaniel, recently reported as organizing a bank at High Point, N. C., with \$75,000 capital, has merged his interests with the North Carolina Savings Bank & Trust Co., which recently began business with \$250,000 capital.

The Commercial and Farmers' Bank of Raleigh, N. C., has been converted into the Commercial National Bank of Raleigh.

The conversion of the Citizens' Bank of Kinston, N. C., into the First National Bank of Kinston with \$100,000 capital has been approved.

Mr. H. G. Von Borries, Hohen Solms postoffice, Ascension parish, Louisiana, informs the MANUFACTURERS' RECORD that he wishes to negotiate a loan upon well-developed agricultural property, and says that the security will bear the closest scrutiny. He desires to get into communication with well-known concerns seeking such investments.



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